128B acc#4

Permittee Litton Systems, Inc.
Clifton Precision Instruments
and Life Support Division
2734 Hickory Grove Road
Davenport, Iowa 52804

I.D. Number IAD005268420
Permit Number IAD005268420

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 USC §6901 et seq., commonly known as RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), a permit is issued to Litton Systems, Inc., Clifton Precision Instruments and Life Support Division (hereafter called the Permittee), to operate a hazardous waste storage facility located in Davenport, Iowa at 2734 Hickory Grove, at latitude 41°32'53" and longitude 90°36'51".

The Permittee must comply with all terms and conditions of this permit.

This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 40 CFR Parts 260 through 264 and 270 and 124 as specified in the permit (Attachment VII). Applicable regulations are those which are in effect on the date of issuance of this permit. (See 40 CFR §270.32(c)).

This permit is based on the assumption that the information submitted in the permit application received on October 4, 1982, as modified by subsequent amendments and letters dated January 27, 1983, February 9, 1983, February 22, 1983, March 29, 1983, August 24, 1983, November 30, 1983, March 23, 1984, April 5, 1984, April 16, 1984, May 4, 1984 and June 22, 1984, (hereafter referred to as the application) is accurate and that the facility will be constructed and operated as specified in the application. Any inaccuracies found in this information may be grounds for the termination or modification of this permit (see 40 CFR §270.41, §270.42 and §270.43) and potential enforcement action. The Permittee must inform EPA of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This permit shall become effective at midnight on September 19, 1984, and shall remain in effect until September 20, 1994, unless revoked and reissued, or terminated (40 CFR §270.41 and 270.43) or continued in accordance with §270.51(a).

David A. Wagoner 8/9/84

David A. Wagoner Date
Director, Air and Waste Management Division

337093

8-9-84

CONTENTS

SECTION I

STANDARD CONDITIONS

A. EFFECT OF PERMIT

The Litton Systems, Inc., Clifton Precision Instruments and Life Support Division, hereafter referred to as the Permittee, is allowed to store hazardous waste in accordance with the conditions of this permit. Any storage of hazardous waste not authorized in this permit is prohibited. Compliance with this permit constitutes compliance, for purposes of enforcement, with Subtitle C of the Resource Conservation and Recovery Act (RCRA). Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3013 or Section 7003 of RCRA, Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9606 (a), commonly known as CERCLA), or any other law providing for protection of public health or the environment.

B. PERMIT ACTIONS (40 CFR 270.30(f))

This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR 270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition. A permit issued under 40 CFR 270.61, "Emergency Permits" may supersede this permit for the duration and extent authorized by the emergency permit.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

D. DUTIES AND REQUIREMENTS

1. Duty to Comply (40 CFR 270.30(a)) The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

2. Duty to Reapply (40 CFR 270.30(b)) If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee shall submit a complete application for a new permit at least 180 days before this permit expires, unless permission for a later submission date has been granted.

3. Permit Expiration (40 CFR 270.51) This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application (see 40 CFR 270.13 through 270.29) and through no fault of the Permittee the Regional Administrator has not issued a new permit as set forth in 40 CFR 270.51.

4. Need to Halt or Reduce Activity Not a Defense (40 CFR 270.30(c)) It shall not be a defense for the Permittee in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to Mitigate (40 CFR 270.30(d)) The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Proper Operation and Maintenance (40 CFR 270.30(e)) The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of the permit.

7. Duty to Provide Information (40 CFR 270.30(h)) The Permittee shall furnish to the Regional Administrator, within a reasonable time, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

8. Inspection and Entry (40 CFR 270.30(i)) The Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

   (a) Enter at reasonable times upon the Permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

9. Monitoring and Records (40 CFR 270.30(j))

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261.

Laboratory methods are specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846 [July 1982]. These analytical methods or an equivalent may be utilized for monitoring purposes.

(b) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record. These periods may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

(c) Records of monitoring information shall specify:

(i) The dates, exact place, and times of sampling or measurements;

(ii) The individuals who performed the sampling or measurements;

(iii) The dates analyses were performed;

(iv) The individuals who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

10. Reporting Planned Changes (40 CFR 270.30(l)(1)) The Permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility.

The replacement of worn or broken parts need not be reported as long as replacement is with an equivalent component which does not adversely affect the designed operating procedures or performance of the facility.

11. Certification of Construction or Modification (40 CFR 270.30(l)(2)) Permittee may not commence storage of hazardous waste at the facility until:

(a) The Permittee has submitted to the Regional Administrator by certified mail or hand delivery a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and

(b) (i) The Regional Administrator has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

(ii) The Regional Administrator has either waived the inspection or has not within 15 days of the date of submission of the letter referenced in (a) above, notified the Permittee of his or her intent to inspect.

12. Anticipated Noncompliance (40 CFR 270.30(l)(2)) The Permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

13. Transfer of Permits (40 CFR 270.30(l)(3)) This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 40 CFR 270.41(b)(2) or 270.42(d). Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270.

14. Compliance Schedules (40 CFR 270.30(l)(5)) Reports of compliance or noncompliance with, or any progress reports on, interim and final requirecontained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(a) by November 1, 1984, the Permittee shall begin construction of the new hazardous waste storage facility in accordance with the application, plans, specifications and permit therefore.

(b) by February 1, 1985, the Permittee shall complete construction of the required facility, and, by said date, shall submit to the EPA certification by an Iowa registered professional engineer that the construction thereof has been completed in accordance with the application, plans, specifications and permit therefore.

(c) by March 1, 1985, the Permittee shall begin full utilization of the required facility.

(d) the Permittee shall submit to the EPA ninety (90) day progress reports stating the progress being made toward completion of the required facility. The first such report shall be submitted on or before October 10, 1984.

15. Twenty-four Hour Reporting (40 CFR 270.30(l)(6)) The Permittee shall report to the Regional Administrator and Iowa Department of Water, Air and Waste Management any noncompliance with the permit which may endanger health or the environment. Rule 900--313.2 of the Iowa Administrative Code requires six (6) hour verbal notification of any spills involving hazardous substances. Likewise, Any such information shall be reported orally to the Regional Administrator of EPA within 24 hours from the time the Permittee becomes aware of the circumstances, including:

(a) Information concerning the release of any hazardous waste which may endanger public drinking water supplies.

(b) Information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility.

(c) The description of the occurrence and its cause shall include:

(i) Name, address, and telephone number of the owner or operator;

(ii) Name, address, and telephone number of the facility;

(iii) Date, time, and type of incident;

(iv) Name and quantity of materials involved;

(v) The extent of injuries, if any;

(vi) An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable; and

(vii) Estimated quantity and disposition of recovered material that resulted from the incident.

(d) A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee need not comply with the five day written notice requirement if the Regional Administrator waives the requirement and the Permittee submits a written report within fifteen days of the time the Permittee becomes aware of the circumstances.

16. Other Noncompliance (40 CFR 270.30(l)(10)) The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time financial test update reports, as required by this permit are submitted. The reports shall contain the information listed in condition D.12 of this section.

17. Other Information (40 CFR 270.30(l)(11)) Whenever the Permittee becomes aware that he failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, the Permittee shall promptly submit such facts or information.

E. SIGNATORY REQUIREMENTS (40 CFR 270.11)

All reports or other information requested by the Regional Administrator shall be signed and certified as required by 40 CFR 270.11.

F. CONFIDENTIAL INFORMATION (40 CFR 270.12)

The Permittee may claim confidential any information required to be submitted by this permit in accordance with 40 CFR 270.12.

G. DOCUMENTS TO BE MAINTAINED AT FACILITY SITE

The Permittee shall maintain at the facility, until closure is completed and certified by an independent professional engineer registered in Iowa, the following documents and amendments, revisions and modifications to these documents:

1. Waste Analysis Plan as required by 40 CFR 264.13 and this permit.

2. Personnel training documents and records as required by 40 CFR 264.16(d) and this permit.

3. Contingency Plan as required by 40 CFR 264.53(a) and this permit.

4. Closure Plan as required by 40 CFR 264.112(a) and this permit.

5. Cost estimate for facility closure as required by 40 CFR 264.142(d) and this permit.

6. Operating record as required by 40 CFR 264.73 and this permit.

7. Inspection schedules as required by 40 CFR 264.15(b) and this permit.

H. AVAILABILITY, RETENTION AND DISPOSITION OF RECORDS (40 CFR 264.74)

1. The Permittee must furnish all required records, including plans, upon request and will make those records available at all reasonable times for inspection, by any officer, employee or representative of EPA who is duly designated by the Administrator.

2. Unless otherwise specified, all records and/or copies thereof required to be maintained by the terms of this permit will be kept on-site for at least three years.

3. The retention period for all required records is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Regional Administrator.

SECTION II

GENERAL FACILITY CONDITIONS

A. DESIGN AND OPERATION OF FACILITY

The Permittee shall design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. This includes adherence to operating conditions and procedures, and emergency shutdown procedures specified in the permit application and in this permit.

B. GENERAL WASTE ANALYSIS (40 CFR 264.13)

The Permittee shall follow the procedures described in the attached Waste Analysis Plan, Attachment I. Waste analysis shall comply with the requirement of 40 CFR 264.13 and 40 CFR 264.17.

C. SECURITY (40 CFR 264.14)

The Permittee shall comply with the security provisions of 40 CFR 264.14(b).

1. The Permittee must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portions of this facility. An artificial or natural barrier which completely surrounds the active portion of the facility and a means to control entry through gates or other entrances to the facility must be maintained at all times.

2. In addition, the Permittee must post and maintain signs bearing the legend "Danger - Unauthorized Personnel Keep Out", at each entrance to the active portion of the facility and at other locations in sufficient numbers to be seen from any approach to this facility. This legend must be written in English and must be legible from a distance of at least 25 feet.

3. The Permittee will advise the EPA if unauthorized entry occurred at the facility which caused hazardous waste to be discharged, the nature of problems, if any, that resulted from this occurrence and corrective action taken by the facility to prevent future happenings. This includes any tampering, destruction or loss at the facility which caused release of hazardous waste.

D. GENERAL INSPECTION REQUIREMENTS (40 CFR 264.15)

1. The Permittee must inspect the facility as per the attached Inspection Schedule, Attachment II, for malfunctions and deterioration, operator errors and discharges which may be causing--or may lead to--(1) release of hazardous waste constituents to the environment or (2) a threat to human health.

2. The Permittee must follow the attached written schedule for the inspection of monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards. The Permittee must keep this schedule at the facility.

3. The Permittee must remedy any observed deterioration or malfunction of equipment or structures (such as leaks, cracks, or wall thinning) to ensure that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

4. The Permittee must record inspections in an inspection log or summary. The log or summary shall be kept for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

E. PERSONNEL TRAINING (40 CFR 264.16)

The Permittee shall conduct personnel training as required by 40 CFR 264.16. This training program shall follow the attached outline, Attachment III. Facility personnel must complete the training program within six months after the date of their employment or assignment to the facility, or assignment to a new position at the facility. Personnel must not work in unsupervised positions until they have completed this training program. Facility personnel must take part in an annual review of the required initial training. The training program shall be directed by a person trained in hazardous waste management procedures. The Permittee shall maintain training documents and records as required by 40 CFR 264.16(d) and (e).

F. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE (40 CFR 264.17(a))

1. The Permittee must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions - sunlight), and radiant heat. While ignitable or reactive waste is being handled, the Permittee will confine smoking and open flame to specially designated locations. "No Smoking" signs will be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

2. The Permittee must document compliance with the requirements of 40 CFR 264.17(a) as outlined in 40 CFR 264.17(c).

G. LOCATION STANDARDS (40 CFR 264.18)

The facility is considered to be located above the hundred year floodplain, thus no permit conditions are needed with respect to location standards.

H. PREPAREDNESS AND PREVENTION

1. Required Equipment (40 CFR 264.32) The facility shall be equipped with the following:

   (a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel.

   (b) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments or State or local emergency response teams.

   (c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment.

   (d) Water at adequate volume and pressure to supply water hose streams or foam producing equipment, or automatic sprinklers or water spray systems.

2. Testing and Maintenance of Equipment (40 CFR 264.33) The Permittee shall test and maintain the equipment specified in permit condition II.I.1. as necessary to assure its proper operation in time of emergency.

3. Access to Communications or Alarm System (40 CFR 264.34) The Permittee shall maintain access to the communications or alarm system as required by 40 CFR 264.34.

   (a) Whenever hazardous waste is being poured, mixed, or otherwise handled, the Permittee must ensure that all personnel involved in the operation will have immediate access to an internal alarm or emergency commmunication device, as described in the Part B permit application either, directly or through visual or voice contact with another employee.

   (b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio capable of summoning external emergency assistance.

4. Required Aisle Space (40 CFR 264.35) At a minimum, the Permittee shall maintain aisle space to allow unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment to any area of the facility in an emergency situation. Aisle space shall be maintained in accordance with Attachment VI.

5. Arrangements with Local Authorities (40 CFR 264.37)

   (a) The Permittee will attempt to make the following arrangements with local authorities.

      (i) Arrangements made to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel will normally be working, entrances to and roads inside the facility, and possible evacuation routes;

      (ii) Where more than one police and fire department might respond, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority where there are more than one;

      (iii) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

      (iv) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(b) Where State or local authorities decline to enter into such arrangements, the Permittee must document the refusal in the operating record.

I. CONTINGENCY PLAN

1. Implementation of Plan (40 CFR 264.51) The Permittee shall immediately carry out the provisions of the Contingency Plan, Attachment IV, and follow the emergency procedures described by 40 CFR 264.56 whenever there is a fire, explosion, or release of hazardous waste or constituents which threatens or could threaten human health or the environment.

2. Copies of Contingency Plan (40 CFR 264.53) The Permittee must keep a copy of the attached Contingency Plan and all revisions of this plan at the facility, and will submit the Contingency plan and all revisions to all local fire departments, police, hospitals, and State and local emergency response teams that may be called to provide emergency services.

3. Amendment of Contingency Plan (40 CFR 264.54)

(a) The Permittee must review, and immediately amend if necessary, the attached Contingency Plan, whenever:

(i) the permit is revised;

(ii) the plan fails in an emergency;

(iii) the facility changes -- in its design, construction, operation, maintenance, or other circumstances -- in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

(iv) the list of emergency coordinators changes; or

(v) the list of emergency equipment changes; or

(vi) when any major revision is warranted.

(b) Amendments to the Contingency Plan are subject to the permit modification requirements of 40 CFR Part 270.

4. Emergency Coordinator (40 CFR 264.55) The Permittee shall comply with the requirements of 40 CFR 264.55, concerning the emergency coordinator. The Permittee will ensure that at all times there will be at least one employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with

responsibility for coordinating all emergency response measures. The emergency coordinator must in addition to carrying out the responsibilities specified in 40 CFR 264.56, be thoroughly familiar with all aspects of the facility's Contingency Plan, all operations and activities at the facility, and the location layout. In addition, this person must have the authority to commit the resources needed to carry out the attached Contingency Plan.

J. RECORDKEEPING AND REPORTING

1. Operating Record. (40 CFR 264.73) The Permittee must keep a written operating record at the facility. The following information will be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

   (a) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage or disposal at the facility as required by Appendix I of 40 CFR Part 264.

   (b) The location of each hazardous waste within the facility and the quantity at each location. This information must include cross-references to specific manifest document numbers if the waste was accompanied by a manifest.

   (c) Records and results of waste analyses performed as specified in 40 CFR 264.13 and 264.17.

   (d) Summary reports and details of all incidents that require implementation of the Contingency Plan;

   (e) Records and results of inspections as required by Condition II.E. "General Inspection Requirements";

   (f) All closure cost estimates as required by 40 CFR 264.142.

2. Biennial Report (40 CFR 264.75) The Permittee shall comply with the biennial report requirements of 40 CFR 264.75.

K. CLOSURE (40 CFR 264, Subpart G)

1. Performance Standard (40 CFR 264.111) The Permittee shall close the facility as required by 40 CFR 264.111 and in accordance with the Closure Plan, Attachment VI.

2. Closure Plan (40 CFR 264.112)

   (a) A copy of the approved Closure Plan and all revisions to the Closure Plan must be kept at the facility until closure is completed and certified by the Permittee and by an independent professional engineer registered in the State of Iowa.

(b) The Closure Plan may be amended at any time during the active life of the facility (the active life of the facility is that period during which wastes are periodically received). The Permittee must amend the plan whenever changes in operating plans or facility design affect the Closure Plan, or whenever there is a change in the expected year of closure. When the Permittee requests a permit modification to authorize a change in operating plans or facility design, he must request a modification of the Closure Plan at the same time. If a permit modification is not needed to authorize the change in operating plans or facility design, the request for modification of the Closure Plan must be made within 60 days after the change in plans or design occurs.

(c) Amendments to the Closure Plan are subject to the permit modification requirements of 40 CFR Part 270.

3. Notification of Closure (40 CFR 264.112(c)) The Permittee shall notify the Regional Administrator at least 180 days prior to the date he expects to begin closure.

4. Time Allowed for Closure (40 CFR 264.113) The Permittee shall treat or remove from the facility site all hazardous wastes within 90 days after receiving the final volume of hazardous wastes and in accordance with the Closure Plan, Attachment VI. The Permittee shall complete all closure activities within 180 days after receiving the final volume of hazardous wastes and in accordance with the Closure Plan.

5. Disposal or Decontamination of Equipment (40 CFR 264.114) The Permittee shall decontaminate and/or dispose of all facility equipment as required by 40 CFR 264.114 and the Closure Plan, Attachment VI.

6. Certification of Closure (40 CFR 264.115) When closure is completed, the Permittee must submit to the Regional Administrator certification both by the Permittee and by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved Closure Plan.

L. COST ESTIMATE FOR FACILITY CLOSURE (40 CFR 264.142)

The Permittee's original closure cost estimate, prepared in accordance with 40 CFR 264.142(a), is specified in Attachment VI.

1. The Permittee must adjust the closure cost estimate for inflation within 30 days after each anniversary of the date on which the first closure cost estimate was prepared, as required by 40 CFR 264.142(b).

The annual inflation adjustment of the closure cost estimate is not subject to the permit modification requirements of 40 CFR Part 270.

2. The Permittee must revise the closure cost estimate whenever there is a change in the facility's Closure Plan as required by 40 CFR 264.142(c).

   This type of revision is subject to the permit modification requirements of 40 CFR Part 270.

3. The Permittee must keep at the facility the latest adjusted closure cost estimate as required by 40 CFR 264.142(d).

M. FINANCIAL ASSURANCE FOR FACILITY CLOSURE (40 CFR 264.143)

The Permittee shall demonstrate continuous compliance with 40 CFR 264.143 by providing documentation of financial assurance, as required by 40 CFR 264.149 and 264.151, in at least the amount of the cost estimates required by permit condition II.M. Changes in financial assurance mechanisms must be approved by the Regional Administrator pursuant to 40 CFR 264.143.

N. LIABILITY REQUIREMENTS (40 CFR 264.147)

The Permittee shall demonstrate continuous compliance with the requirements of 40 CFR 264.147 and the documentation requirements of 40 CFR 264.149 and 264.151, including the requirements to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs.

O. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS (40 CFR 264.148)

The Permittee shall comply with 40 CFR 264.148 whenever necessary.

SECTION III

STORAGE IN CONTAINERS

A. WASTE IDENTIFICATION

1. The Permittee may store the following wastes in containers at the facility, subject to the terms of this permit:

EPA HAZARDOUS WASTE NUMBER	DESCRIPTION
F001/F002	The following spent halogenated solvents used in degreasing: trichloroethylene and 1,1,1,-trichloroethane.
F003	The following spent non-halogenated solvents: xylene, acetone, n-butyl alcohol, and methanol.
F005	The following spent non-halogenated solvents: toluene, and methyl ethyl ketone.
F007	Spent cyanide plating bath solutions from electroplating operations.
F008	Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process.
D001	A solid waste that exhibits the characteristic of ignitability, but is not listed as a hazardous waste in Subpart D, i.e., hexane, cyclohexane and paint and lacquer thinners.
D002	A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in Subpart D.

EPA HAZARDOUS WASTE NUMBER	DESCRIPTION
D005	A solid waste exhibiting the characteristic of EP toxicity containing barium at a concentration equal to or greater than 100.0 milligrams per liter.
D006	A solid waste exhibiting the characteristic of EP toxicity containing cadmium at a concentration equal to or greater than 1.0 milligrams per liter.
D007	A solid waste exhibiting the characteristic of EP toxicity containing chromium at a concentration equal to or greater than 5.0 milligrams per liter.
D008	A solid waste exhibiting the characteristic of EP toxicity containing lead at a concentration equal to or greater than 5.0 milligrams per liter.
D009	A solid waste exhibiting the characteristic of EP toxicity containing mercury at a concentration equal to or greater than 0.2 milligrams per liter.
D010	A solid waste exhibiting the characteristic of EP toxicity containing selenium at a concentration equal to or greater than 1.0 milligrams per liter.

2. The hazardous wastes identified above shall be stored in a maximum of 170 fifty-five (55) gallon drums meeting the U.S. Department of Transportation specifications (Attachment VI). When necessary, damaged fifty-five (55) gallon drums or other small damaged containers (e.g., fifteen (15) gallon acid carboys) may be stored in separate eighty-three (83) gallon overpack drums. Acid carboys which are intact may also be stored within the storage area, provided that these storage additions do not exceed the storage design capacity. The drums of hazardous waste shall be stored in the hazardous waste storage building.

B. CONTAINER STORAGE AND CONTAINMENT SYSTEM

1. Condition of Containers (40 CFR 264.171) If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit.

2. Compatibility of Waste with Containers (40 CFR 264.172) The Permittee shall assure that the ability of the container to contain the waste is not impaired as required by 40 CFR 264.172.

3. Management of Containers. (40 CFR 264.173) The Permittee shall manage containers as required by 40 CFR 264.173.

4. Special Requirements for Ignitable or Reactive Waste. (40 CFR 264.176)

   The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line.

5. Special Requirements for Incompatible Waste (40 CFR 264.177) The Permittee shall store incompatible waste in containers in accordance with requirements of 40 CFR 264.177.

6. Inspections (40 CFR 264.174) At least weekly, the Permittee must inspect the hazardous waste storage building looking for leaking containers and for deterioration of containers and the containment system as specified in Attachment II.

7. Containment. (40 CFR 264.175) The Permittee shall maintain the containment system in accordance with requirements of 40 CFR 264.175 as specified in the attached plan sheet, Attachment VII.

8. Containment System. (40 CFR 264.175) The containment system design as provided in Attachment VI must meet the following criteria:

   (a) The base must be free of cracks or gaps and sufficiently impervious to contain leaks, spills and accumulated precipitation until the collected material is removed.

   (b) The containment system must be designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation unless the containers are elevated or otherwise protected from contact with accumulated liquids.

(c) The containment system must have sufficient capacity to contain 10 percent of the volume of containers or the volume of the largest container, whichever is greater.

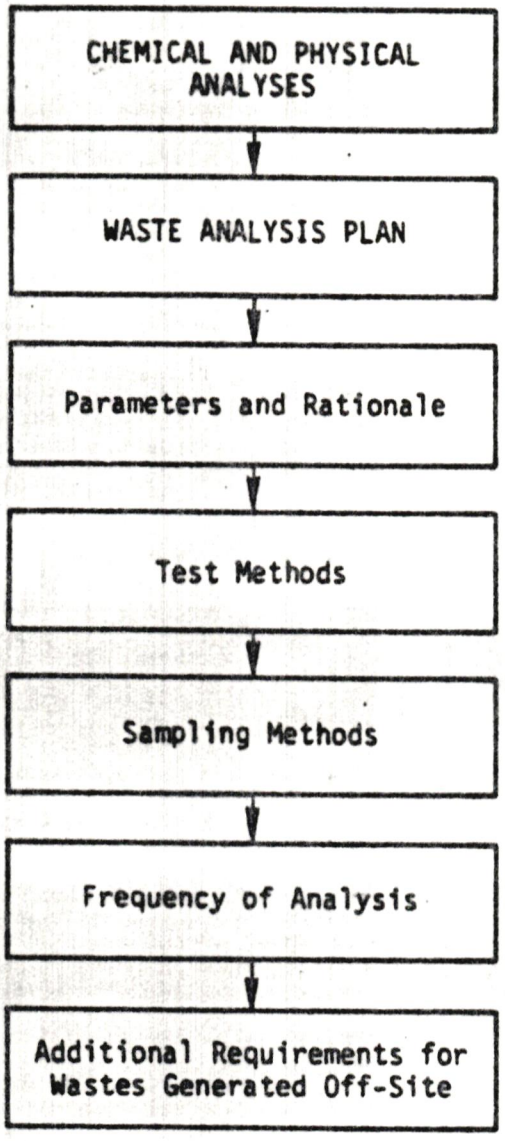
(d) Spilled or leaked waste and accumulated precipitation must be removed in a timely manner.

ATTACHMENTS

NUMBER	DESCRIPTION
Attachment I	Waste Analysis Plan
Attachment II	Inspection Schedule
Attachment III	Personnel Training Program
Attachment IV	Contingency Plan
Attachment V	Closure Plan and Cost Estimate
Attachment VI	Plans and Specifications for Hazardous Waste Drum Storage Building
Attachment VII	Regulations

Attachment I

Waste Analysis Plan



TAB C - waste characteristics flowchart.

itton Instruments & Life Support Division

2734 Hickory Grove Road, P.O. Box 4508, Davenport, Iowa 52808 319-383-6000

15 March 1984

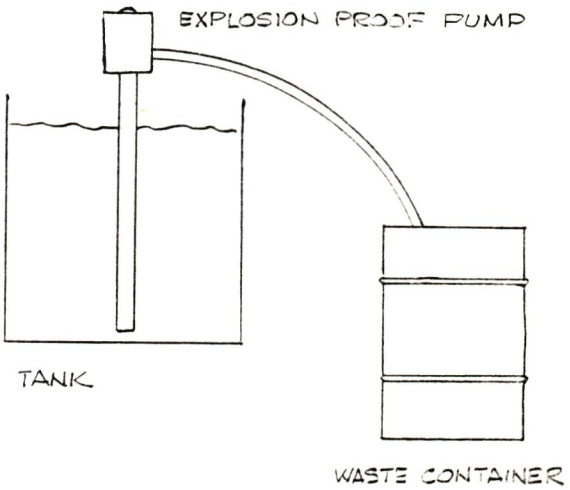
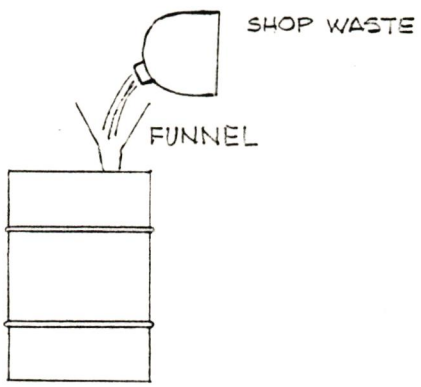
WASTE CHARACTERISTICS

Our original Part A Permit Application was submitted on the basis of "F" definitions in the 19 May 1980 Federal Register. These were potentially numbers F001, F003, F005, F007, F008, F009, F010, and F011. The description applied to these "F" numbers has now changed. The new numbers which apply now are restated as F001, F002, F003, F005, F007, F008, D002, and D005. This change of hazardous waste numbers is made without changing the quantity of hazardous waste which we generate. Appropriately marked small quantity collection containers are located in the various areas where wastes are generated. The maintenance oiler periodically consolidates these collections into appropriately marked storage drums in a posted, controlled access, fill area near the back dock and later transfers the filled, closed and labeled drums to the hazardous waste storage area. Some of the hazardous wastes tend to be batch accumulations, such as spent plating baths. These are placed immediately into storage drums, closed, labeled and transported directly to the hazardous waste storage area. Placement of these wastes into storage containers is diagramed on page C-2.1.

The above activities are the responsibility of the Plant Engineer and the Maintenance Supervisor. Collecting, filling and transporting will be done by the maintenance oiler. Another person will always be in the storage facility whenever containers are being placed in or removed from storage. The Maintenance Supervisor will provide the appropriate information on the Hazardous Waste log (Pages C-4 & C-5). The log will be kept in the Plant Engineering office and completed sheets will be transferred by the Maintenance Foreman to the Manager of Safety and Security for permanent retention.

At the time of a clean-out of a plating process, several drums of waste will be removed and the millwright and the plating lead person my be involved to help. All of these people are included in the training program.

COLLECTION OF WASTES

WASTE #	SOURCE	COLLECTION METHOD
F001 F002	DEGREASERS, SONIC CLEANERS.	
F007 D002 D005	PLATING TANKS.	SAME AS ABOVE.
F003 F005	VARIOUS SHOP WORK-STATION LOCATIONS.	

CLIFTON PRECISION
Litton Instruments & Life Support Division

(Instructions on back)

HAZARDOUS WASTE LOG

CONTAINER NUMBER	LOC.	ACCUMULATION DATE		E.P.A. NUMBER	CONTENT DESCRIPTION	SAMPLE NUMBER AND DATE	ANALYSIS NUMBER	MANIFEST NUMBER	SHIP DATE
		START	END						

15 Mar 1984

HAZARDOUS WASTE LOG INSTRUCTIONS

- The original is retained by the Plant Engineer until all blanks are filled in and then the sheet is given to the Manager of Safety and Security for file and retention.

- Column instructions - (left to right)

  - Container number - A sequential number placed on the Hazardous Waste Label.
  - Location - Use "C" if drum is in filling area. When moved to storage, cross out "C" and insert a number 1 thru 6 to indicate appropriate cell in the storage building.
  - Accumulation date, Start - Date when HW first goes into empty drum.
  - Accumulation date, End - Date when drum is sealed.
  - EPA Number - Appropriate "F001", "F007", etc.
  - Content Description - Both in-plant description and the DOT Shipping name.
  - Sample Number and date - as assigned by Metallurgical/Chemistry Laboratory.
  - Analysis Number - as shown on the Testing Lab analysis report.
  - Manifest Number - as assigned by I&LSD Shipping Department.
  - Shipped Date - Date when HW leaves I&LSD.

(Page C-4 Back)

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE, OR
PUBLIC SAFETY AUTHORITY, OR THE
U.S. ENVIRONMENTAL PROTECTION AGENCY

PROPER D.O.T.
SHIPPING NAME _____ UN OR NA# _____

GENERATOR INFORMATION:
NAME CLIFTON PRECISION - I & LSD
ADDRESS 2734 HICKORY GROVE ROAD
CITY DAVENPORT STATE IA ZIP 52804

EPA
ID NO. IAD 005268420

EPA
WASTE NO. F

ACCUMULATION
START DATE _____

MANIFEST
DOCUMENT NO. _____

HANDLE WITH CARE!

CONTAINS HAZARDOUS OR TOXIC WASTES

STYLE WM-6

C-3

Litton

15 March 1984

The categories of Hazardous Wastes collected and stored at I&LSD and requiring periodic analysis may include:

Waste Numbers	Example of Occurrences	Example of Waste
F001/F002	Vapor Degreasers	Trichloroethylene
F003	Assembly Solvent	Acetone, Xylene
F005	Paint Thinners	Toluene, lacquer thinner
F007	Spent Plating Baths	Cadmium Cyanide Solution
F008	Solids from Plating Tanks	Cadmium Cyanide Residue
D002	Spent Plating Bath	Tin Stannates, Caustic Soda, Chromic Acid Solutions
D005	Spent Plating Bath	Sodium Dichromate

The rational of our waste analyses plan is to establish typical analyses for those "streams" which are accumulated on a daily or frequent basis.

Since the plating and finishing baths, etc. need be discarded only occasionally, these contributions may be packaged, identified, labeled and analyzed "as required", as opposed to "stream" accumulation analysis.

15 Mar 1984

A Hazardous Waste storage building will be constructed along the west end of the main factory building. Six curbed containment cells are provided as shown in the generalized sketches on Pages C-8 and C-9. The Technical Performance Specification which were submitted to the EPA on 29 March 1983 will govern the details of this building, except as may be modified and mutually agreed to by both parties.

Employees involved will consult the Senior Chemist or other member of the Metallurgical/Chemistry Laboratory when placing plating wastes in storage if the "D" or "F" number identifications do not provide sufficient information for optimum segregation.

The chemist will make use of the rationale in the following table to further insure segregation of incompatibles.

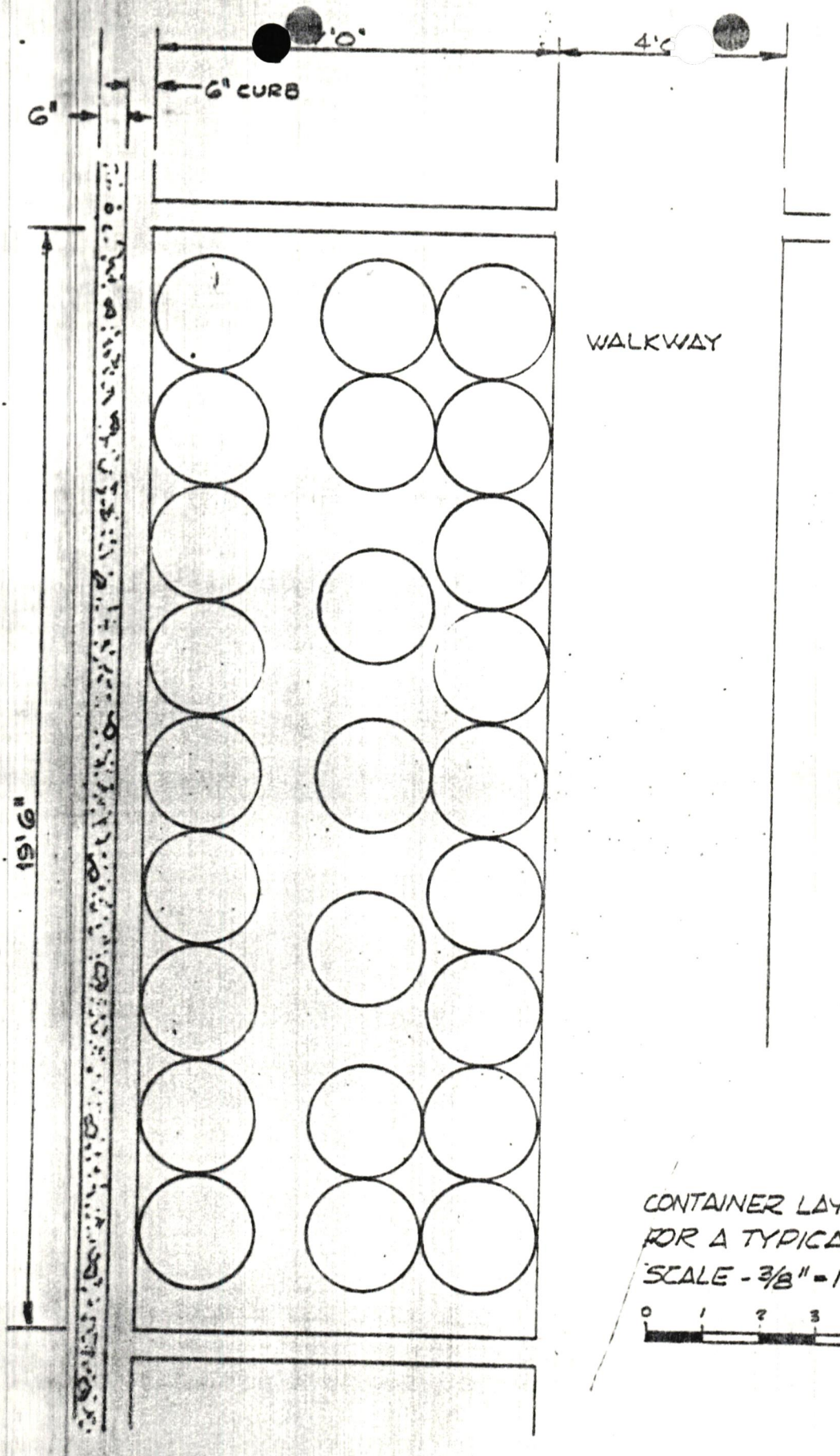
POTENTIALLY INCOMPATIBLE WASTES

Alkaline caustic liquids Alkaline cleaner Alkaline corrosive liquids Spent caustic Cyanide solutions	WITH	Acid sludges
Potential consequences: Heat, violent reaction or cyanide gas evolution.		
Alcohols Halogenated hydrocarbons Unsaturated hydrocarbons Other reactive organic compounds and solvents	WITH	Acids/caustics
Potential consequences: Fire, explosion, or violent reaction, or gas evolution.		
Chromic Acid Hyphochlorites Nitrates	WITH	Acetic acid and other organic acids Concentrated mineral acids Alcohols
Potential consequences: Fire, explosion, or violent reaction.		

REFER TO BELING CONSULTANTS TECHNICAL PERFORMANCE SPECIFICATIONS FOR BUILDING DETAILS.

PLAN VIEW
STORAGE BUILDING

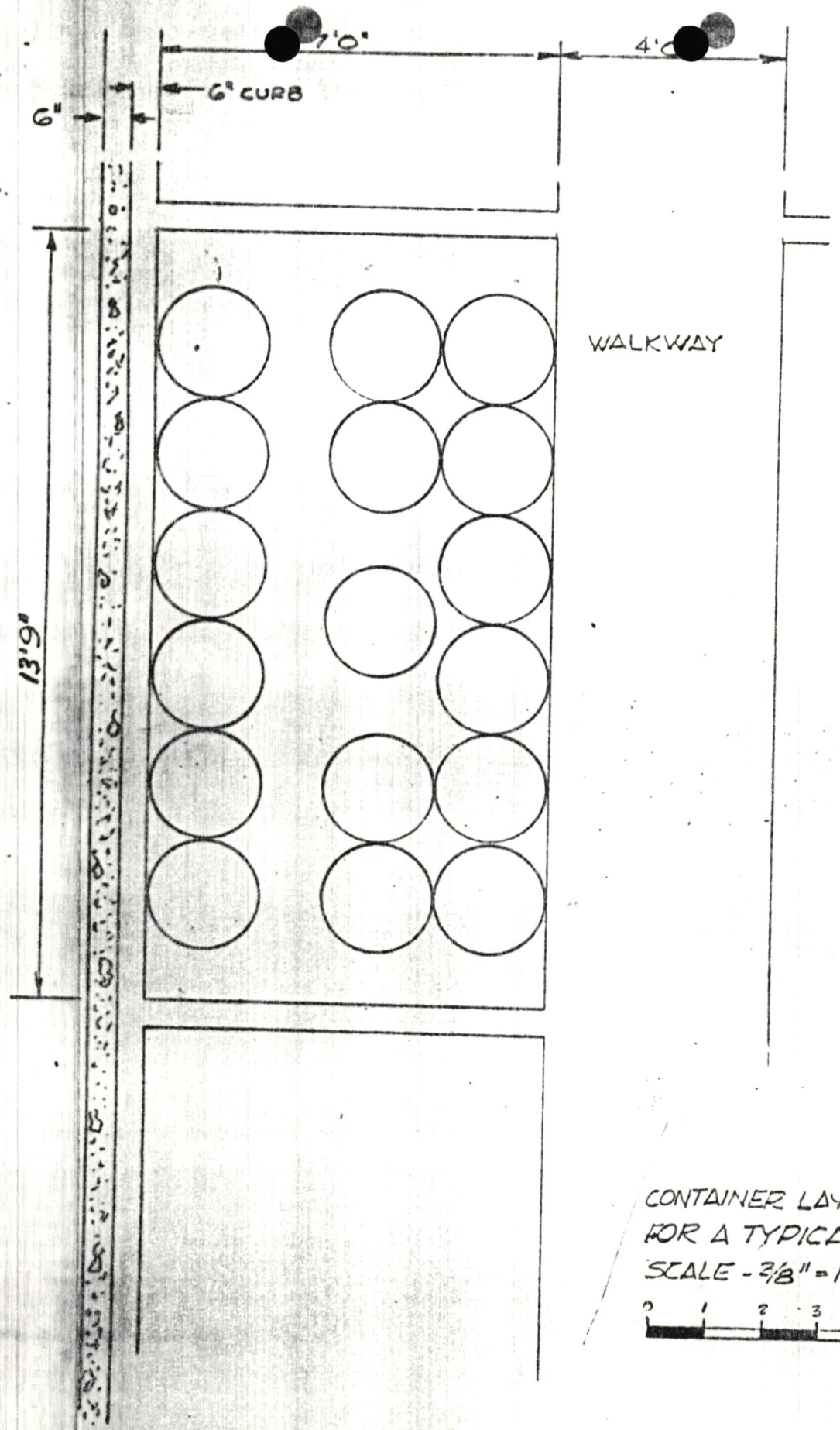
SCALE: 1" = 8'



CONTAINER LAYOUT DIAGRAM
FOR A TYPICAL CELL (LARGE)
SCALE - 3/8" = 1'0"

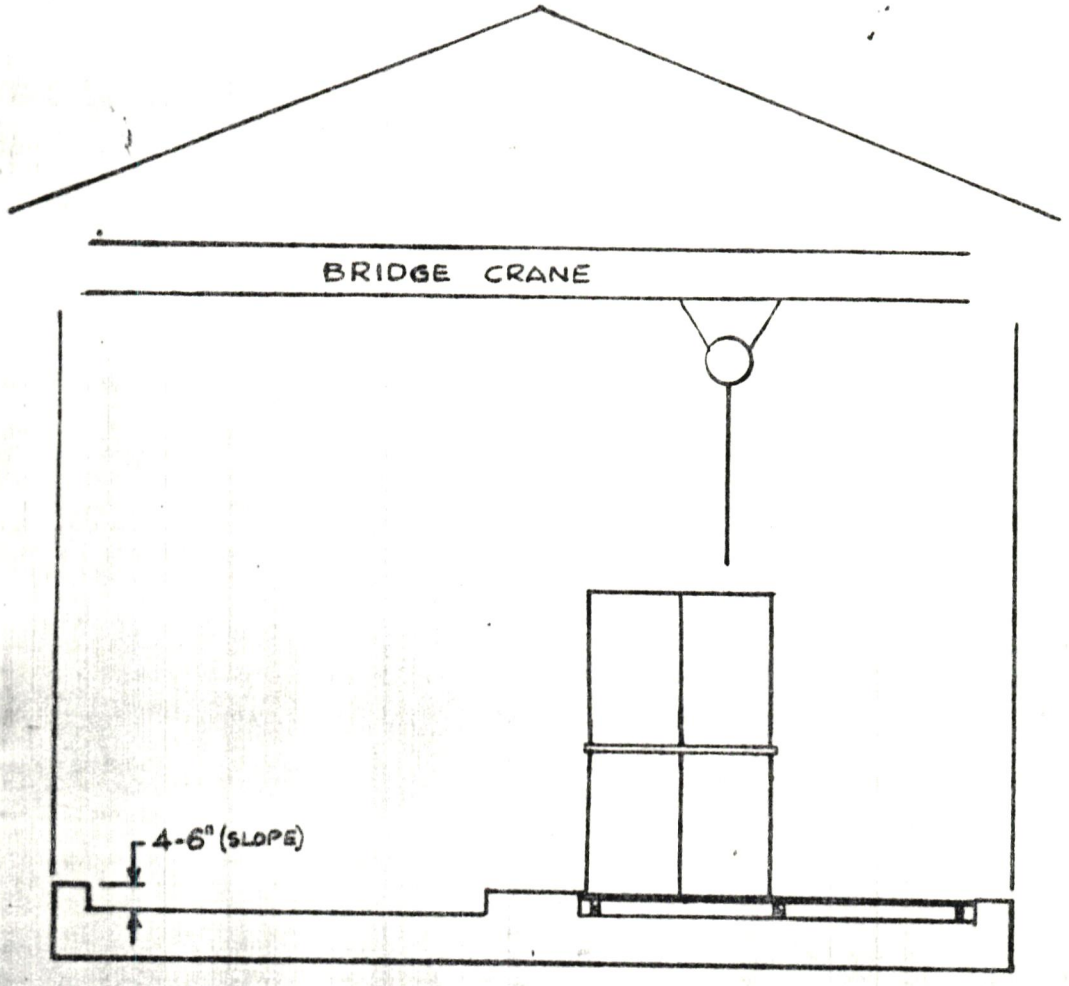
0 1 2 3 4 5 6 7

C-8.1



CONTAINER LAYOUT DIAGRAM
FOR A TYPICAL CELL (SMALL)
SCALE - 3/8" = 1'0"

C-8.2



TYPICAL END VIEW ELEVATION

SCALE: 1" = 4'

REFER TO BELING CONSULTANTS TECHNICAL PERFORMANCE SPECIFICATIONS FOR BUILDING DETAILS.

15 Mar 1984

The Hazardous Wastes are re-arranged in four columns below. The items in each column are considered compatible with one another.

SOLVENTS	PLATING SOL.	OXIDIZERS	ACIDS
Methanol	Cad plate sol.	Chrome plate sol.	Hydrochloric acid
Ethyl alcohol	Copper plate sol.	Chrome sludge	Nitric acid
Denatured alcohol	Silver plate sol.	Chromic acid anodize	Mixed acid
Isopropyl alcohol	Tin plate sol.		Iridite
MEK	(and sludges from above solutions)		Electropolish
Toluene (Toluol)	Aluminum etch		Sulfuric acid anodize
Hexane	Zincate		Nickel plate sol.
Paint and lacquer thinner	Electro cleaner		

Acetone
Xylene
Butyl alcohol
Cyclohexane
Triclene (1,1,2-Trichloroethylene)
Chlorothene
(1,1,1-Trichloroethane)

Sampling, handling and testing (analyzing) methods shall be per 40 CFR, Part 261, Appendix I, Representative Sampling Methods; Appendix II, E.P. Toxicity Test Procedures; and Appendix III, Chemical Analysis test methods. Specifically, under Appendix I, a Nasco "Coliwasa" composite liquid waste sampler will be used, when applicable.

Analysis shall be repeated every 24 months, or, if there is no activity in a particular category for that length of time, at each occurrence. Each category will additionally be reanalyzed whenever there is a marked change in the associated processes or practices, or should the disposal facility notify us of an obvious change.

The chart shown on Page C-11 details our sampling and testing plan.

HAZARDOUS WASTE SAMPLING AND TESTING

EPA HW NO.	DESCRIPTION	EPA HAZARD CODE	SAMPLING & TESTING SPECS	SAMPLING METHODS	TESTING METHODS
F001 F002	Chlorinated Solvents	T	40 CFR, Part 261.33, Appendix I, III	"Coliwasa" B 1098 WA liquid sampler	Seta-Flash or Pensky-Martens Closed Cup flash tester, FID Gas Chromatograph
F003	Flammable solvents, non-toxic	I	" "	" "	Closed cup flash apparatus FID, Gas Chromatograph
F005	Flammable solvents toxic	I, T	40 CFR, Part 261.33, Appendix I, II and III	" "	Closed cup flash apparatus, FID Gas Chromatograph, Extraction toxicity
F007	Spent plating baths	R, T	" "	" "	Extraction toxicity, Atomic absorption, pH meter, Colorometric CN
F008	Plating bath sludges	R, T	" "	Per ASTM Std. D 140-70, crushed or powdered material	Extraction toxicity, Atomic absorption, pH meter, Colorometric CN
D002 D006 D007 D009	Spent plating baths	C	" "	"Coliwasa" B 1098 WA liquid sampler	Extraction toxicity, pH meter, Atomic absorption, Sulfide Titration, Colorometric cyanide & phenol
D005 D006 D007 D008 D010	Spent plating bath	T	" "	"Coliwasa" B 1098 WA liquid Sampler	Extraction toxicity, Atomic absorption, pH meter

15 March 1984

Pages C-13, C-14, C-15, C-15.1 and C-15.2 include the parameters which will be analyzed and are typical examples of Analytical reports on Hazardous Wastes generated at this facility in the recent past. The waste code subsequently used for shipping is also included. Parameters which will specifically be requirements of future analyses are:

Recyclable
% of Recovery
Specific Gravity
(Spent)
(Distillate)
Boiling Range
Flash Point
Solid Content
(non-volatile)
Ash Content
Composition (Vol.%)
pH
Silver, Ag
Arsenic, As
Barium, Ba
Cadmium, Cd
Chromium, Cr
Copper, Cu
Mercury, Hg
Nickel, Ni
Lead, Pb
Selenium, Se
Zinc, Zn

The Log Sheet form which is used to track the samples sent out for analysis is shown on Page C-16.

WASTE RESEARCH and RECLAMATION CO., INC.
ROUTE 7, EAU CLAIRE, WI 54701
Phone: (715) 834-9624

P.O. 80-36319

Source Clifton Precision Instruments
Life Support Division
Davenport, Iowa

Date 10/22/82

(Page 1 of 3)

	F001	D002	D005
	Sample # 09121 #9 (Tri and 1-1-1)	Sample # 09122 #7 HCl/H2SO4	Sample # 09123/09126 #4 Dichromate Salt #5 Color Seal
Recyclable	Yes (No)	Yes (No)	Yes (No)
% of Recovery	80% As Mixture	For Disposal Only	For Disposal Only
Specific Gravity (Spent) (Distillate)	(1) 1.33 (2) 1.326	(1) 1.04 (2) ----	(1) 1.00/1.14 (2) -- --
Boiling Range	72 - 80°C	----	--------
Flash Point	>200°F	>200°F	> 200°F
Solid Content (non-volatile)	0.735%	~20% Liquid	15.21%
Ash Content	0.007%	1.712%	9.270%
Composition(Vol.%)	1-1-1 Trichloroethane 85% Trichloroethylene 15%	Water Based Acidic Solution	Water Based Solutions
pH	6.5	1.0	5-6
	Metals (all in ppm)	Metals (all in ppm)	Metals (all in ppm)
Silver, Ag	0.05	0.50	<2.5
Arsenic, As	<0.02	<0.20	<1.0
Barium, Ba	15	140	1,000
Cadnium, Cd	1.4	650	5.0
Chromium, Cr	0.2	14	20,000
Copper, Cu	1.7	45	5.0
Mercury, Hg	<0.02	0.20	<0.02
Nickel, Ni	0.1	14	5.0
Lead, Pb	0.8	15	<25
Selenium, Se	<0.02	<0.20	1.5
Zinc, Zn	4.0	100	5.0
		Acids, to neutralize and for disposal	

Lab Report Prepared By

WASTE RESEARCH
ROUTE 7
EAU CLAIRE, WI 54701
JIING-YUN LEE, V.P.

RECEIVED
OCT 29 1982
PURCHASING

C-13

38

WASTE RESEARCH and RECLAMATION CO., INC.
ROUTE 7, EAU CLAIRE, WI 54701
Phone: (715) 834-9624

P.O. 80-36319

Source Clifton Precision Instruments
Life Support Division
Davenport, Iowa

Date 10/22/82

(Page 2 of 3)

	F003	F007	D002
	Sample # 09124 #10 Non-Chloronated Solvent	Sample # 09125 #1 Cadmium-CN·NaOH	Sample #09127, 09128, 09130 #3,#8,#2 Chromic Acids
Recyclable	(Yes) No	Yes (No)	Yes (No)
% of Recovery	80%	For Disposal Only	For Disposal Only
Specific Gravity (Spent)	(1) 0.88	(1) 1.15	(1) 1.02 - 1.07
(Distillate)	(2) 0.865	(2) --	(2) ----
Boiling Range	74 - 110°C	--	----
Flash Point	< 70°F	>200°F	>200°F
Solid Content (non-volatile)	0.93%	35.72%	~ 40% Liquid
Ash Content	0.012%	24.141%	4.503%
Composition(Vol.%)			
	Toluene 70%	Water based caustic	Water based Acidic
	Alcohols 30%	solution	solutions
pH	6.5	~13	1 - 2
	Metals (all in ppm)	Metals (all in ppm)	Metals (all in ppm)
Silver, Ag	<0.05	< 5.0	<0.50
Arsenic, As	<0.02	<2.0	0.30
Barium, Ba	20	2,000	50
Cadnium, Cd	15	18,000	50
Chromium, Cr	0.5	<10	300
Copper, Cu	0.5	140	<1.0
Mercury, Hg	2.75	< 0.02	0.20
Nickel, Ni	<0.1	10	<1.0
Lead, Pb	1.0	<50	< 5.0
Selenium, Se	<0.02	< 2.0	< 0.20
Zinc, Zn	1.7	600	40
		Alkaline	Acids, need to neutralize and for disposal

Lab Report Prepared By WASTE RESEARCH
ROUTE 7
EAU CLAIRE, WI 54701
JIING-YUN LEE, V.P.

WASTE RESEARCH and RECLAMATION CO., INC.
ROUTE 7, EAU CLAIRE, WI 54701
Phone: (715) 834-9624

P.O. 80 - 36319

Source Clifton Precision Instruments
Life Support Division
Davenport, Iowa

Date 10/22/82

D002

	Sample # 09129 #6 Tin Salt/High Caustic	Sample #	Sample #
Recyclable	Yes (No)	Yes No	Yes No
% of Recovery	For Disposal Only		
Specific Gravity (Spent)	(1) 1.00	(1)	(1)
(Distillate)	(2) ----	(2)	(2)
Boiling Range	----		
Flash Point	>200°F		
Solid Content (non-volatile)	~35% Oily		
Ash Content	0.584%		
Composition(Vol.%)			
	Water based Caustic Solution		
pH	~12		
	Metals (all in ppm)	Metals (all in ppm)	Metals (all in ppm)
Silver, Ag	<0.10		
Arsenic, As	0.10		
Barium, Ba	30		
Cadnium, Cd	0.2		
Chromium, Cr	2.0		
Copper, Cu	<0.2		
Mercury, Hg	0.10		
Nickel, Ni	<0.2		
Lead, Pb	<1.0		
Selenium, Se	0.06		
Zinc, Zn	0.8		
	Alkaline, need to neutralize and for disposal		

Lab Report Prepared By WASTE RESEARCH
ROUTE 7
EAU CLAIRE, WI 54701
JIING-YUN LEE, V.P.

Beling Laboratories

Job B-11,001-1-80 (3615)

Laboratory Report

To: Watts Trucking Service, Inc.
438 4th Street
Rock Island, Illinois 61201
Attention: Mr. Stan Wojciechowski

Date Received: April 30, 1980
Sample Type: Bendix [redacted]
Client P.O. #:
Date of Report: May 19, 1980

PARAMETERS	TOTALS	LEACHABLES
Flash Point	<60°F	
pH	7	
Alkalinity	<10 mg/kg	
Total Solids	20.9%	
Ash	14.4%	
Cyanides	5.8 mg/kg	
Arsenic	<0.01 mg/kg	
Barium	10.0 mg/kg	
Cadmium	1.0 mg/kg	
Chromium	3775 mg/kg	<1 mg/kg
Copper	2.8 mg/kg	
Nickel	3.2 mg/kg	
Lead	800 mg/kg	53 mg/kg
Zinc	2600 mg/kg	3.6 mg/kg

Analysis performed by Gulf Coast Laboratories, Inc.

Analysis Certified By:
Paul A. Lang
Chief Chemist

Job: 0-11,001-1-80 (3615)

Lelling Laboratories

Laboratory Report

To: Watts Trucking Service, Inc.
438 4th Street
Rock Island, Illinois 61201
Attention: Mr. Stan Wojciechowski

Date Received: April 30, 1980
Sample Type: Bendix [redacted]
Client P.O. #:
Date of Report: May 20, 1980

ADDENDUM

	TOTALS
Silver	<0.5 mg/kg
Selenium	<0.5 mg/kg

Analysis Certified By:

Chief Chemist

Form 500

HAZARDOUS WASTE SAMPLE LOG SHEET

SAMPLE Nº _____ SAMPLE DATE _____

MATERIAL IDENTIFICATION _____

COMPOSITE OF DRUM Nº's _____

DATE _____ SAMPLE SENT FOR ANALYSIS TO:

_____

_____

_____

_____

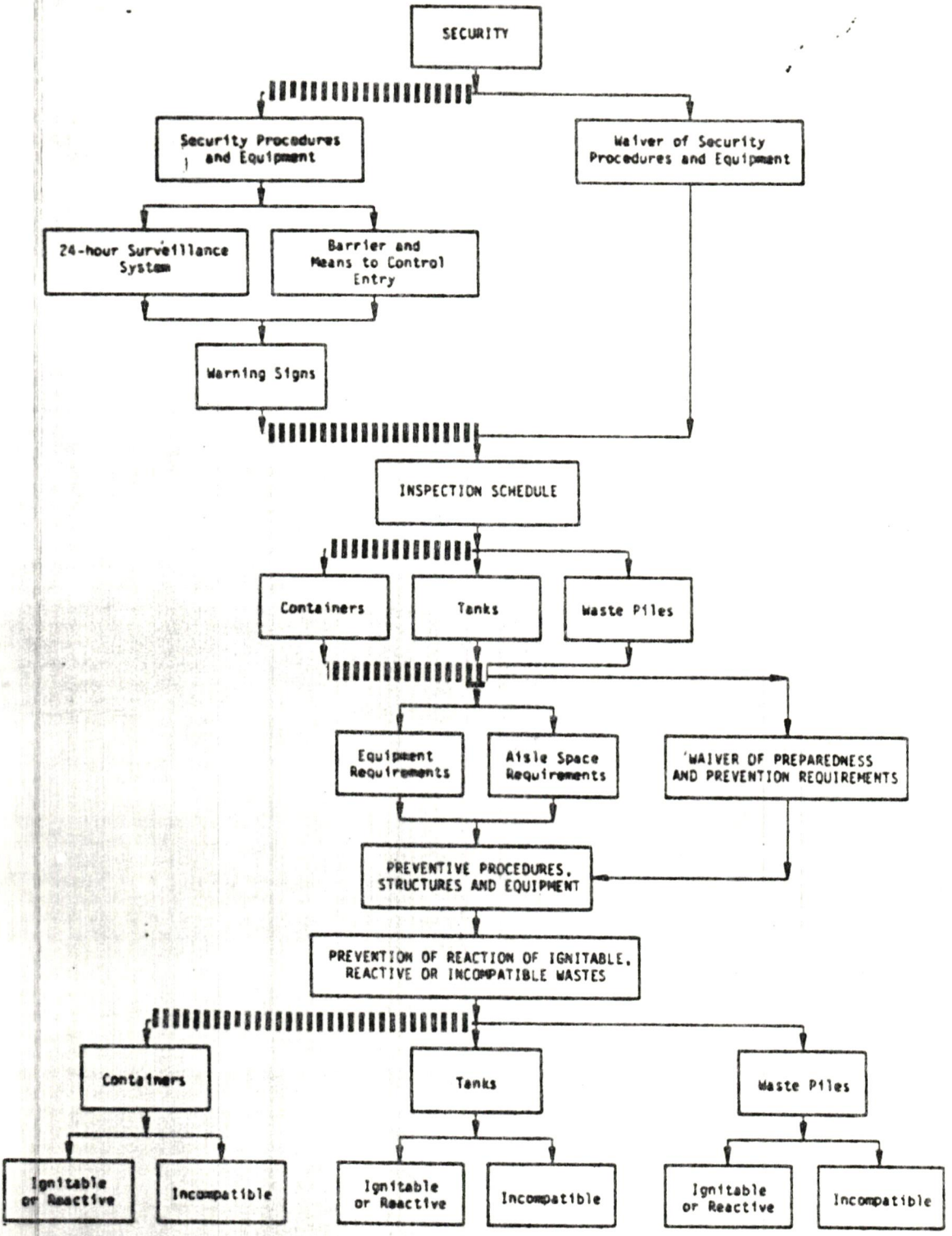
LAB REPORT _____ RECEIVED _____

FROM: R N PIERCE ROUTE TO: L W MOATS P E BOHNSACK

C-16

Attachment II

Inspection Schedule



TAB F - procedures to prevent hazards flowchart.

▮▮▮▮▮▮▮ - I&LSD path

Litton Instruments & Life Support Division

2734 Hickory Grove Road, P.O. Box 4508, Davenport, Iowa 52808 319-383-6000

15 Mar 1984

HAZARD PREVENTION PLAN

I. SECURITY

This plan has been developed to prevent the unknowing entry, and minimize the possibility for unauthorized entry, of persons into the ILSD or the hazardous waste storage facility. Compliance to 40 CFR Part 264 is detailed herein.

A. Barriers

Hazardous waste generated as a result of the manufacturing processes at ILSD is containerized and stored within the fenced portion of the plant grounds at least 50 feet from our property line. The perimeter fence is 6 feet high of woven link design, with the south and east sections extended to a 9 foot height. All of the fence is then topped by a triple line of barbed wire. Access through the fence during normal working hours is controlled by a guard at the main gate. Access through a secondary gate is also controlled by the guard. There are two entrances to the main building which are not within the perimeter fence. One is the visitor lobby, where further plant access is controlled by a receptionist. A sample of the sign-in form is shown on Page F-3. The other is the employment lobby where further plant access is controlled by locked doors. These doors are all locked during non-working hours. The storage areas inside the perimeter barrier are locked as a means of controlling access by unauthorized people.

B. Guards

Contract Guard service provides a 24 hour surveillance system for the facility. A sample of the sign-in form used here is shown on Page F-4. Guard rounds are conducted hourly during the facility non-working hours. During these rounds, and at any other time when the guard is not at the post, all entry gates are locked.

CLIFTON PRECISION
Instruments & Life Support Division

VISITOR REGISTER

DATE _____

(PLEASE PRINT)
NAME _____

REPRESENTING _____

LOCATION _____

U.S. CITIZEN YES ☐ OTHER _____

TO SEE _____

TIME IN _____ TIME OUT _____ BADGE NO _____

ESCORTED BY _____

A5022-90A

Litton CL.. TON PRECISION
Instruments & Life Support Division

REGISTER SHEET

Name	Company Represented	Date	Your Position	Badge Number	To Be Filled in by Receptionist/Guard		
					Disposition	In	Out

C. Signs

The entrance to the active portion of the facility and the storage areas are posted with signs which carry the legend, "Danger - Unauthorized Personnel Keep Out". Other sections of the perimeter are posted with signs, "No Trespassing". The Hazardous Waste Storage Building will have "No Smoking" signs on or near the doors. All signs are in English since that is the predominant language.

II. INSPECTION SCHEDULE

An inspection schedule has been established for the waste storage facility to determine if there are any malfunctions, deteriorations, operator errors, or discharges which may cause (1) a threat to human health, or (2) release of hazardous waste constituents to the environment. The schedule is detailed on Page F-6 and lists the item to be inspected, the type of problem to be looked for and the frequency of inspection.

III. INSPECTION LOG

A log of items that are on the inspection schedule has been made. The log is detailed on Pages F-7, F-8 and F-9 and provides for the following:

Date and time of inspection
Name of inspector
Item inspected
Potential problem
Status - ok/reject
Problem details
Remedial action

As inspections are completed, the Log Sheets are forwarded to the Manager - Safety & Security for retention for the necessary three year period. If the "Remedial Action" column does not indicate the discrepant item has been taken care of or does not indicate that a Work Order has been written, then, necessary action shall be taken by the Manager - Safety & Security to accomplish the necessary maintenance in a timely manner. The subsequent Log Sheets will indicate if and when the problem has been solved.

INSPECTION SCHEDULE

HAZARDOUS WASTE STORAGE FACILITY

Area/Equipment	Specific Item	Types of Problems	Frequency of Inspection
Safety and emergency equipment			
Universal absorbents and neutralizers		Out of stock	Monthly
Drums (Steel)		Out of stock	Monthly
Emergency showers	(PLANT)	Water pressure, leaking, drainage	Monthly
Face shields and extra protective eyeglasses		Broken or dirty equipment	Monthly
Chemical cartridge respirators for organic vapors and acid gases		Out of stock supplies	Monthly
Fire alarm system (Halon)		System trouble (Supplier checks system every 6 months)	Monthly
Public address system	(PLANT)	Inoperable. (Automatic daily check when plant works)	Monthly
Generators	(PLANT)	Operational	Monthly
Emergency lighting system	(PLANT)	Battery failure, lights	Monthly
First aid equipment and supplies	(PLANT)	Items out of stock or inoperative (Automatic daily check when plant works)	Monthly
Protective clothing-coveralls		Holes, normal wear and tear	Monthly
Storm Sewer Valve		Closed	Monthly
Security devices			
Facility fence	(PLANT)	Corrosion, damage to chain-link fence or barbed wire	Monthly
Main gate and lock	(PLANT)	Corrosion, damage to chain-link fence or barbed wire	Monthly
East gate and lock	(PLANT)	Corrosion, damage to chain-link fence or barbed wire	Monthly
Container filling and storage areas			
Container placement and stacking		Aisle space, height of stacks	Weekly*
Sealing of containers		Open lids	Weekly*
Labeling of containers		Improper identification, date missing	Weekly*
Containers		Corrosion, leakage, structural defects	Weekly*
Segregation of incompatible wastes		Storage of incompatible wastes in same area	Weekly*
Base or foundation		Cracks, spalling, uneven settlement, erosion, wet spots	Weekly*
Curbs		Cracks, deterioration	Weekly*
Warning signs		Damaged	Weekly*
Access		Blocked or restricted	Weekly*

*These items will be checked whenever there is activity in the filling or storage areas, however, the period will not exceed one week.

SAFETY AND EMERGENCY EQUIPMENT INSPECTION LOG SHEET

HAZARDOUS WASTE STORAGE FACILITY

Inspector's Name/Title _____

Date of Inspection _____ (Month/Day/Year) Time of Inspection _____ (Military Time)

Item	Types of Problems	STATUS		Observations	Date and Nature of repairs/remedial action
		OK	Reject		
Universal absorbents ½ lb. pillows, 60 minimum	Out of stock				
Sodium Bicarbonate - 1 minimum 5 gal. plastic container	Out of stock, No Scoop				
Unlined 55 gal. drums, Closed Head, Minimum 2	Out of stock				
83 gallon steel salvage drums - 3 minimum	Out of stock				
Emergency showers - One in Oil House, adjancent to Hazardous Waste filling area. One in Dept. 412, adjacent to Hazardous Waste storage area. Two in Plating Dept.	Water pressure, leaking, drainage				
Face shield - One in Oil House, One in Storage Area	Missing, broken or dirty equipment				
Chemical cartridge respirators for organic vapors and acid gases.	Minimum stock (3)				
Storm Sewer Valve	Closed				

SAFETY AND EMERGENCY EQUIPMENT INSPECTION LOG SHEET

HAZARDOUS WASTE STORAGE FACILITY

Inspector's Name/Title _____

Date of Inspection _____ (Month/Day/Year) Time of Inspection _____ (Military Time)

Item	Types of Problems	STATUS		Observations	Date and Nature of repairs/remedial action
		OK	Reject		
Fire alarm system (Halon)	System trouble light				
Public address system (PLANT)	Inoperable				
Generators (PLANT)	Inoperative				
Emergency lighting systems (PLANT)	Battery failure, lights				
First Aid equipment and supplies (PLANT)	Items out of stock or inoperative				
Protective clothing, flame resistant, disposable, 2 minimum	Holes, normal wear and tear Out of stock				
Facility fence (PLANT)	Corrosion, damage to chain link fence or barbed wire				
Main gate and lock (PLANT)	Corrosion, damage to chain link fence or barbed wire; inoperable lock				
East gate and lock (PLANT)	Corrosion, damage to chain link fence or barbed wire; inoperable lock				

CONTAINER FILLING AND STORAGE AREA INSPECTION LOG SHEET

HAZARDOUS WASTE STORAGE FACILITY

Inspector's Name/Title _____

Date of Inspection _____ (Month/Day/Year) Time of Inspection _____ (Military Time)

Item	Types of Problems	STATUS		Observations	Date and Nature of repairs/remedial action
		OK	Reject		
Container placement and stacking	Aisle space, height of stacks				
Sealing of containers	Open lids				
Labeling of containers	Improper identification, date missing				
Containers	Corrosion, leakage, structural defects				
Segregation of Incompatible Wastes	Storage of incompatible wastes in same cell				
Base or foundation	Cracks, spalling, uneven settlement, erosion, wet spots				
Curbs	Cracks, deterioration				
Debris and refuse	Aesthetics, possible reaction with leaks				
Warning Signs	Damaged, missing				

VA

Litton

15 Mar 1984

IV. PRECAUTIONS TO PREVENT IGNITION OR REACTIONS

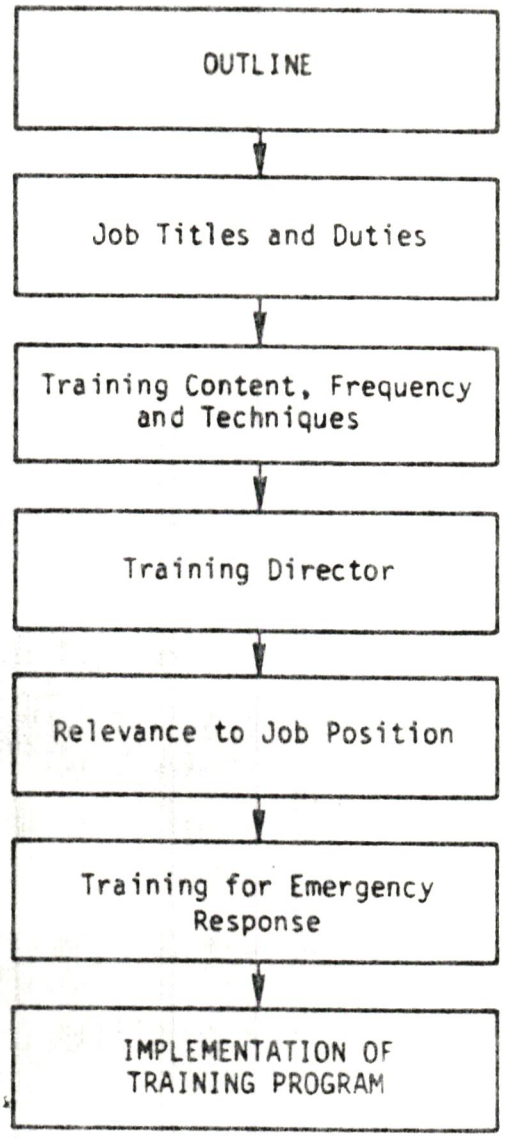
Separation will be the key element in our management of ignitable and reactive wastes, as defined in part 261.21 and 261.22. Our training plans for both management and operating personnel will caution against the indiscriminate mixing of wastes, particularly from the plating department. This is true not only to preserve the integrity of a "stream" analysis, but to avoid a reaction. If in doubt, the senior chemist may be consulted, or the container (drum) closed, identified and stored in the partially filled condition.

Incompatible wastes in either the filling area or storage area are contained in separate cells and in the event of a rupture, they will be contained. Therefore, no reactions are anticipated. In addition to the storage facility being posted, there is no smoking allowed in the filling area. All areas of our main facility are sprinklered. The proposed storage facility will be protected by Halon.

The new facility will contain appropriate heating and ventilation and be built for storage only. As such, there will not be any sources of ignition from open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, spontaneous ignition or radiant heat.

Attachment III

Personnel Training Program



TAB H - personnel training flowchart.

Instruments & Life Support Division

2734 Hickory Grove Road, P.O. Box 4508, Davenport, Iowa 52808 319-383-6000

15 Mar 1984

TRAINING

Persons directly concerned with this subject will be classroom trained in accordance with Section 264.16, and will be retrained as specified below.

The millwright, the maintenance oiler, the lead plater and the maintenance foreman are the persons directly involved with the collection and storage of hazardous wastes. The duties of these four people relative to hazardous waste management are:

Maintenance Oiler - Label collection drums, collect small containers of identified wastes from throughout the plant and transfer contents into collection drums. Move the filled collection drums to hazardous waste storage area. This is the primary person allowed access to both the filling and storage area.

Millwright - Assists the Oiler in transporting and storing hazardous waste. Also, may assist waste hauler to load hazardous waste being removed from facility.

Lead Plater - Assists the Oiler and Millwright in emptying the plating baths whenever the solutions need to be replaced.

Maintenance Foreman - Direct supervisor of above noted people and responsible for their actions to insure compliance with our Hazardous Waste Management Plan. As supervisor, he shall provide the necessary instruction related to a particular job, including any attendant safety or health problems.

These people by the very nature of their jobs, provide cross-training for one another and generally we could expect them to fill in for one another if needed. These people will be given an intensive two session training course prior to December 31, 1982. The Manager of Safety and Security will be the training director. Training material is contained in a training manual which has been written for this division.

The outline on Page H-4 was followed in preparing the basic manual. The above named classifications will also be retrained at yearly intervals. Job descriptions for these people, as developed for union contracts, will be on file with the training record as shown on Pages H-5 thru H-7. All training records will be retained until closure of the hazardous waste storage facility. Topics to be stressed in the retraining session will be emergency procedures, fires and explosions, the contingency plan and any new regulatory requirements.

In addition to the above, the division recognizes a need for informing other persons not directly concerned with Hazardous Waste Management. Accordingly, the training director has met with the Manager of Manufacturing and all Manufacturing foremen. An audio visual program on waste management was shown at that time. Similar programs will be presented to operating personnel, who also, though not directly connected with waste management activities, have some peripheral connection. These particular sessions are not expected to be conducted on predetermined schedules.

Each attendee in the introductory training receives a copy of the Training Manual. Sections 1 through 3 are covered by lecture in the training session. There is an audio-visual presentation which provides an overview of the RCRA and its impact on industry when involved with hazardous wastes. In the advanced training (after having been involved in the introductory training), Section 4 of the Training Manual is discussed with the people intimately involved in hazardous waste management. Subjects covered are: waste characteristics; precautions in collection of wastes; safety; emergencies; inspections; and identification and inventory control.

As an indication of our concern, that our employees are aware of RCRA and the Hazardous Waste management requirements, the document shown on Pages H-8 and H-9 has been printed and given to all current employees and will be given to all new employees as they are hired.

Litton

OUTLINE OF HAZARDOUS WASTE TRAINING MANUAL

1.0 Introduction
- 1.1 Chemical Hazards
- 1.2 The Resource Conservation and Recovery Act - RCRA

2.0 Facility and Process Description
- 2.1 Description of Wastes to be Managed
- 2.2 Description of Storage Facility
- 2.3 Key Terms of the Permit
- 2.4 Normal/routine Operations
- 2.5 Waste Analysis
- 2.6 Recordkeeping and Reporting Requirements
- 2.7 Security
- 2.8 Inspections

3.0 Emergency Procedures and Contingency Plans
- 3.1 Emergency Coordinator
- 3.2 Emergency Procedures
- 3.3 Emergency Communications/Phone Numbers and Alarms
- 3.4 Location, Maintenance, Inspections, and Use of Emergency Equipment
- 3.5 Procedures for Waste Feed Cutoff Systems
- 3.6 Spill Control and Response to Groundwater Contamination Incidents
- 3.7 Fires and explosions
- 3.8 Power Interruption or Failure
- 3.9 Tornados, Hurricanes and Severe Storms

4.0 Detailed Instructions
- 4.1 Hazardous Waste Characteristics
- 4.2 Hazardous Wastes
- 4.3 Safety
- 4.4 Emergencies
- 4.5 Inspection
- 4.6 Identification and Inventory Control

6D

Litton

GENERAL

HAZARDOUS WASTE TRAINING RECORD
(Sign-In Sheet)

Date: _____ Instructor: _____

TRAINING MANUAL SECTIONS 1,2,&3
ATTENDEES

	NAME	JOB TITLE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

(Copy to Employee File)

Ref. 264.16 (b) & (c)

G1

Litton

HAZARDOUS WASTE MANAGEMENT PERSONNEL LOG
TRAINING MANUAL SECTION 4

DATE	JOB TITLE	NAME	DATE OF INITIAL TRAINING
	INSTRUCTOR		

(Copy to Employee File)

Ref. 264.16 (d) (1)

Litton

HAZARDOUS WASTE MANAGEMENT PERSONNEL LOG

TRAINING MANUAL SECTIONS 1,2,3 & 4.

DATE	JOB TITLE	NAME	DATE OF RE-TRAINING
	INSTRUCTOR		

(Copy to Employee File)

Ref. 264.16 (d) (1)

/ASTE ACCUMULATION CONSIDERATIONS

Guidelines are established for accumulating hazardous wastes to ensure that the way the materials are kept does not increase the risk of harm to the environment or to human health. Considerations address:

- The AREA - should be well marked, secure, neat, containers protected, allow spill control, reflect special concern for ignitable and reactive wastes.

- The PROCEDURES - involve emergency preparedness and prevention, regular inspections, employee training.

- The CONTAINERS - should be appropriate for type of waste, marked with hazardous waste warning, labeled to indicate nature of hazard. There should be no mixing of incompatible materials.

H-8 (FRONT)

64

OVERVIEW of WASTE MANAGEMENT ISSUES

HAZARD IS WASTE MANIFEST SYSTEM

The Resource Conservation and Recovery Act ("RCRA") sets out the EPA's minimum requirements for handling hazardous wastes. The hazardous waste manifest system is an important aspect of this program.

A HAZARDOUS WASTE MANIFEST is a document that details what wastes are being disposed and how much waste is being disposed. The manifest tracks every facility that handles hazardous waste materials, from the generator to the disposal site, or from the "cradle" to the "grave".

IN CONCLUSION . . .

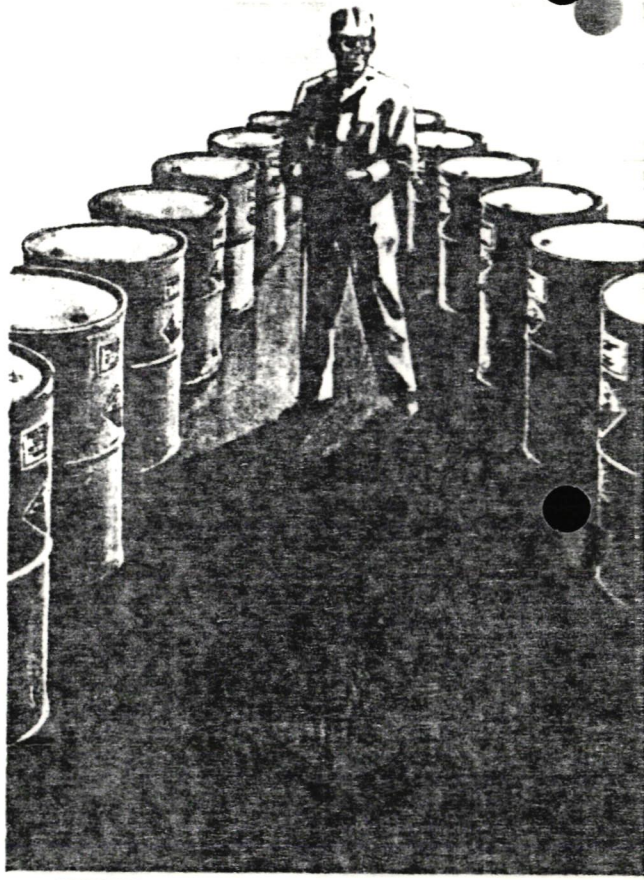
Your supervisor or the Environmental Affairs Coordinator at your facility will give you more specific information on the types of wastes handled at your location, and the safety and handling procedures that have been set up. IF YOU HAVE ANY QUESTIONS - ASK.

With careful and informed planning, with the use of sound handling and operating techniques, and through cooperation with regulating authorities,

HAZARDOUS WASTE CAN BE MANAGED.

7-82 PSB

HAZARDOUS WASTE MANAGEMENT



Litton
CLIFTON PRECISION
Instruments & Life Support Division

HAZARDOUS WASTE MANAGEMENT . . . a challenge requiring a multi-faceted approach for solution. Without proper controls, hazardous wastes could pose a threat to the environment or to human health.

Hazardous wastes and waste disposal can be managed safely, just as industrial plants and products are. Waste management programs implemented by both industry and the federal government include tight controls on waste handling practices and fix strict accountability for those who generate, transport, treat, store and dispose of hazardous wastes.

Effective control of hazardous wastes involves:

- Identification of the hazardous wastes,
- Definition of personal safety precautions,
- Establishing procedures for waste accumulation and storage, and
- Use of the hazardous waste manifest system for transport and disposal.

This brochure reviews some general elements of hazardous waste control. In each of these areas, specific procedures have been developed for your facility.

H-9(back)

65

IDENTIFICATION of HAZARDOUS WASTES

A waste is considered hazardous by the EPA if it has one or more of the following characteristics:

IGNITABILITY - Involves how easily the waste will catch fire or cause a fire.

CORROSIVENESS - Refers to a material's ability to "eat through" another material.

REACTIVITY - Involves how a material will behave in the presence of other materials.

TOXICITY - Refers to the likelihood that a material may cause adverse effects on the environment or on human health.

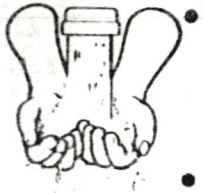
The term "hazardous" means that the material is capable of producing some harm or some adverse effect such as injury, illness or contamination of the ground or the water. "Hazardous" does not necessarily mean that the material will produce an adverse effect, just that it can produce an adverse effect if it is not handled properly.

PERSONAL SAFETY PRECAUTIONS

Minimizing the risk of injury, fire or explosion requires complete knowledge of the nature and the chemical properties of the waste materials being handled. However, there are some general safety precautions that are appropriate for all hazardous waste materials.

- Be aware of what you are handling, and know what safety rules have been set up for those materials.

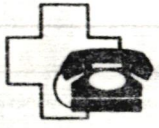
- Use personal protective equipment whenever it is required.



- Wash your hands thoroughly after handling any chemical material. Wash up before eating or drinking and before you go home.

- Do not keep or consume lunches or beverages, or use tobacco products in areas where hazardous wastes are stored or handled.

- Make sure there is no source of ignition in areas where flammable liquids are used or stored.



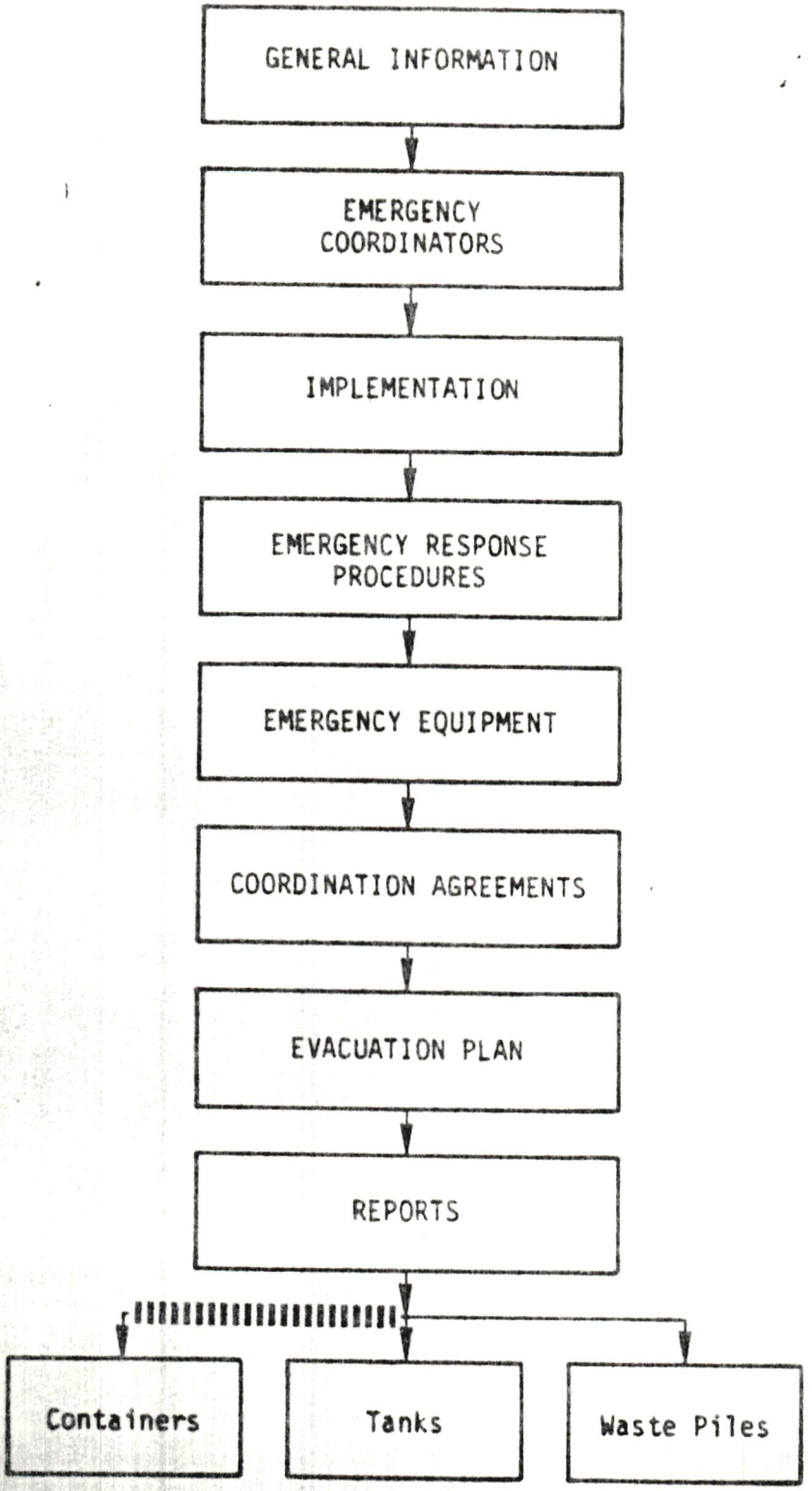
- Be familiar with the emergency and first aid procedures for your facility.

- Observe good housekeeping practices within areas where hazardous wastes are handled or stored.

- Be alert to the condition of containers and equipment in waste accumulation areas.

Attachment IV

Contingency Plan



TAB G - contingency plan flowchart.

▮▮▮▮▮▮▮ - I&LSD path

Litton Instruments & Life Support Division

2734 Hickory Grove Road, P.O. Box 4508, Davenport, Iowa 52808 319/323-6XXX

15 Mar 1984

CONTINGENCY PLAN

The plan contained in this application is one that has been in existence for several years at I&LSD. Additions have been made to include items which also make it useable for the needs of the EPA. As further changes are made, EPA and the Emergency Services will be notified and if deemed necessary, a new memorandum of agreement will be requested by Instruments & Life Support Division.

CLIFTON PRECISION
Litton Instruments & Life Support Division

2734 Hickory Grove Road, P.O. Box 4508, Davenport, Iowa 52808 319 383 6000

15 Jul 1982

To: Community Emergency/Disaster Coordinators

In compliance with requirements of the Resource Conservation and Recovery Act Section 3004 as promulgated by the Environmental Protection Agency in 40 CFR, Part 264, Subparts C & D, we submit a copy of our Emergency/ Disaster Contingency Plan. This deals with natural, man-made, and hazardous waste emergency/disaster situations. After you have had an opportunity to review this document, I would like to meet individually with your representative to define and agree on your role in the event we should ever need to implement the plan.

I would appreciate a response from you by 30 July 1982.

You may reach me on 383-6293 between 8:00 am and 4:30 pm.

P. E. Bohnsack
Manager-Safety & Security

Distribution:

Davenport Fire Department
331 Scott Street
Davenport, Iowa 52801

Davenport Police Department
420 Harrison Street
Davenport, Iowa 52801

Mercy Hospital
West Central Park at Marquette
Davenport, Iowa 52804

Scott County Civil Defense Agency
Scott County Court House
416 West 4th Street
Davenport, Iowa 52801

Scott County Sheriff
Scott County Court House
416 West 4th Street
Davenport, Iowa 52801

Pinkerton's, Inc.
303 - 18th Street
Rock Island, Illinois 61201

Clifton Precision
Instruments & Life Support Division

2734 Hickory Grove Road P.O. Box 4508 Davenport, Iowa 52808 319 383 6000

DIVISIONAL SAFETY & HEALTH POLICY Policy No. E-2 15 Mar 1984

Title - EMERGENCY/DISASTER CONTINGENCY PLAN

I. PURPOSE

A. To establish a system for orderly and effective protection of employees and company property, vital records and inventories, and capital equipment during times of emergency such as, but not limited to, fire, bomb warning, tornado, riots, explosion, demonstrations, release of hazardous waste to air, soil, or surface water, etc.

B. To establish a system for restoration of full operating capabilities to the division.

II. APPLICABILITY

This policy & procedure shall apply to the Instruments & Life Support Division of Clifton Precision and is for immediate implementation and dissemination.

III. DISTRIBUTION

Distribution shall be to those who have copies of the Safety & Health Policy Manual. In addition, copies shall be given to those others whose names are (or shall be) included in the plan as active participants. Beyond this, copies (and subsequent changes) shall be given to the following organizations:

Scott County Civil Defense Agency

Scott County Sheriff

Davenport Fire Department

Davenport Police Department

Mercy Hospital

Pinkerton's, Inc.

IV. PLAN

Included in attached Publication No. 7264

V. REFERENCE DATA	OFFICE	HOME
A. Scott County Civil Defense Agency Scott County Court House 416 West 4th Street Davenport, Iowa 52801	Tel. (319) 326-8663	
B. Scott County Sheriff Scott County Court House 416 West 4th Street Davenport, Iowa 52801	Tel. (319) 326-8663	
C. Davenport Fire Department 331 Scott Street Davenport, Iowa 52801	Tel. (319) 322-4473	
D. Davenport Police Department 420 Harrison Street Davenport, Iowa 52801	Tel. (319) 326-7911	
E. Mercy Hospital West Central Park at Marquette Davenport, Iowa 52804	Tel. (319) 383-1100	
F. Pinkerton's, Inc. 1800 3rd Avenue Rock Island, Illinois 61201	Tel. (309) 794-0815	
G. Clifton Precision Instruments & Life Support Division Emergency Coordinator & Authorized Alternates (in order) -		
Paul E. Bohnsack 4566 Bunker Hill Drive Bettendorf, Iowa 52722	Tel. (319) 383-6293	(319) 355-7814
L. William Moats 3109 Maplecrest Road Bettendorf, Iowa 52722	Tel. (319) 383-6405	(319) 332-7283
Richard N. Pierce 5340 7th Avenue Moline, Illinois 61265	Tel. (319) 383-6246	(309) 764-0965

Title - EMERGENCY/DISASTER CONTINGENCY PLAN

	OFFICE	HOME
Hobart D. Russell R.R. #3, Box 184 Davenport, Iowa 52804	Tel. (319) 383-6429	(319) 285-4327

H. National Response Center Tel. (800) 424-8802

I. RCRA Section 3004; 40 CFR Part 264, Subparts B. C. and D.

J. The Provost Marshal General, Department of the Army - "Industrial Defense Against Civil Disturbances and Sabotage".

K. Bomb Disposal Unit Tel. (312) 926-2081
Ft. Sheridan, Illinois

L. Iowa Department of Water, Air and Waste Management
Regional Office #6 Tel. (319) 653-2135
Washington, Iowa

M. Iowa Department of Water, Air and Waste Management
Main Office
Henry A. Wallace Building Tel. (515) 281-8694
900 East Grand
Des Moines, Iowa 50319

Litton
CLIFTON PRECISION
Instruments & Life Support Division
P.O. Box 4508, Davenport, Iowa 52808

Emergency Plan

Publication No. 7284C
15 March 1984

Emergencies, whether man-made or natural, rarely sound advance warning. To survive, we must make appropriate plans for protection against emergencies from all causes.

To insure survival of this division's personnel, facilities and records; this Emergency Plan is published. It will be distributed to personnel concerned with responsibility for advance preparations required in the event of an emergency.

Please review this Emergency Plan and familiarize yourself with its contents. When you and your subordinates are familiar with it, you will be better prepared to effectively participate in the event of an emergency.

TABLE OF CONTENTS

1. PLAN OBJECTIVES

- Protect surrounding, local environment and the health and safety of division employees.
- Protect I&LSD property, capital equipment, vital records and inventories.
- Protect and/or restore the facility to full operating capabilities.

2. TYPES OF EMERGENCIES

- Fire, explosion, flood, high winds, hazardous waste releases, etc.
- Electric, gas and water failure with no damage to the plant.
- Bomb threats -- actual or false. A Bomb Threat Action Plan outlining the procedures to be followed in the event of a bomb threat received at this facility is reproduced herein as Appendix I.

3. EMERGENCY PLAN METHODS

- Appoint an Emergency Coordinator.
- Appoint an Emergency Advisory Committee.
- Implement this emergency plan.
- Obtain the assistance of trained emergency groups located within the plant, city and state.
- Establish a control center and communications system.
- Develop emergency shutdown procedures.
- Plan for mass movement of employees.
- Establish executive succession list to ensure continuity of management.
- Assign emergency duties to department heads and appropriate employees.
- Protect vital company records and documents.
- Publish articles about emergency planning in company employee publications.

- Inform and educate employees in methods of personal survival in times of emergencies.

- Provide a 24 hour plant security force.

4. MANAGEMENT RESPONSIBILITY

4.1 SUCCESSION

In the absence of the General Manager, the following individuals will act in the order listed. These individuals will make the necessary decision to take appropriate action required.

- Director of Manufacturing

- Director of Employee Relations

- Controller

4.2 EMERGENCY COORDINATOR

The Manager of Safety & Security is designated as the Emergency Coordinator. His prime responsibility is to direct emergency operations and to form all facets of emergency planning into an integrated and workable plan. This plan should be designed to meet all contingencies regardless of severity. He is responsible for presenting procedures and techniques to the Emergency Advisory Committee, and to make changes to the emergency plan as necessary. The Emergency Organization and functions are shown in Figure 1. The following are additional duties of the Emergency Coordinator:

- Chair the Emergency Advisory Committee and call meetings as necessary.

- Maintain and distribute emergency plan manuals.

- Maintain liaison with local emergency agencies.

- Advise the executive in charge of the status and effectiveness of the emergency plan.

- Prepare articles about emergency planning for employee publications.

- Report directly to the executive in charge and the Emergency Advisory Committee during periods of emergency on all phases of the emergency operation.

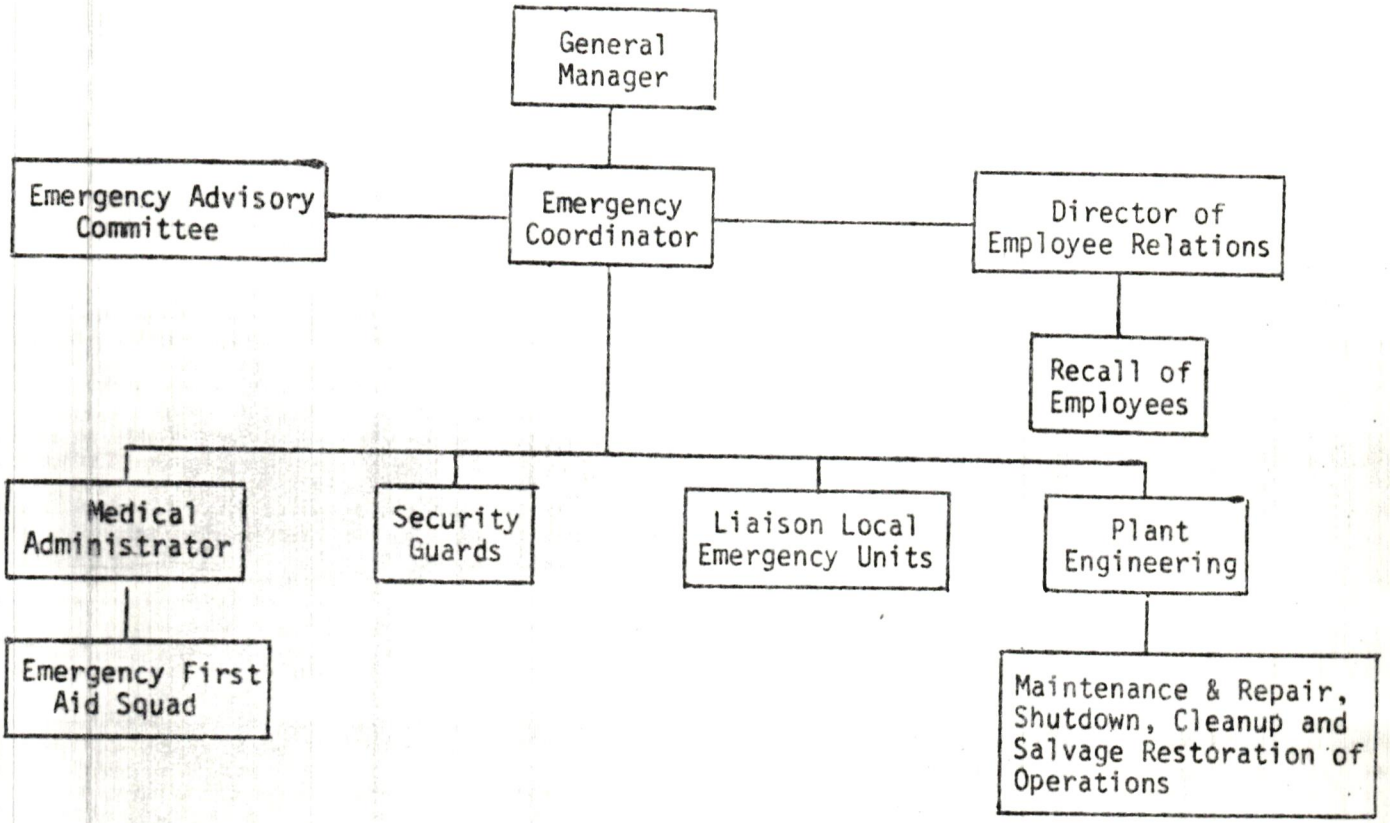


Figure 1. Emergency Organization and Functions

Litton

4.3 EMERGENCY ADVISORY COMMITTEE

The plant Emergency Advisory Committee shall assist in formulating and executing emergency plans and assist in employee instruction. The committee shall consist of the following members:

- Emergency Coordinator
- Director of Employee Relations (acting in the absence of the Emergency Coordinator)
- Plant Engineer
- Engineering manager of Support Engineering
- Manufacturing manager of assembly and fabrication
- Other personnel the above management team deems necessary to cope with the situation

5. SUPERVISION RESPONSIBILITY

In case it should become necessary during times of emergency, the supervisory staff will augment the security force in assisting with traffic control both in the plant and outside, turning off lights, machinery, etc., and generally securing of all facilities in their areas. They will take charge of keeping aisles clear for firemen and other emergency units.

In case it should become necessary to evacuate the plant, it will be the supervisor's responsibility to see that all employees are evacuated in an orderly manner.

6. CONTROL CENTER AND COMMUNICATION SYSTEM

6.1 CONTROL CENTER

A control center will be established at the Guard House with a secondary center in First Aid. In the event an emergency occurs, the following personnel will report to the primary control center:

- General Manager or in his absence, the executive in charge.
- Director of Manufacturing
- Director of Employee Relations
- Manager of Safety & Security

78

Litton

6.2 COMMUNICATIONS & TRANSPORTATION

Located in the Control center will be the following:

- Interplant extension, 273, (272 & 345 in First Aid)
- Emergency and fire phone (This line to be separate from other incoming and outgoing lines), extension 370
- Public Address System
- Outside phone extensions 520 and 370
- AM-FM portable radio
- Flashlights
- A plant layout drawing
- Fire alarm location panel and location drawing
- Master key and company vehicle keys
- First Aid kit
- Sprinkler alarms

All company vehicles will be available for command post personnel.

7. EMERGENCY ORGANIZATIONS

The following are the various organizations and their functions which are available in an emergency:

7.1 DAVENPORT FIRE DEPARTMENT

- Respond to a major fire within the plant.
- The Davenport Fire Chief assumes responsibility for all phases of fire fighting with the assistance of any available trained personnel.

Litton

7.2 PLANT PROTECTION GUARDS

- Control exits and entrances at gates
- Receive and sound alarms of fires and other emergencies
- Notify key people of emergencies
- Control, with the help of supervisors, the evacuation of an area of the plant or the entire plant.

7.3 MEDICAL ADMINISTRATOR

- Notify physicians of assistance required.
- Notify the hospital of casualties to be received.
- Give emergency treatments to injured personnel in the First Aid room and/or Conference Center. These rooms will serve as receiving stations for casualties (unless there is a complete evacuation)
- Assist physicians that have been called
- Arrange transportation of seriously injured to nearby hospitals

7.4 EMERGENCY FIRST AID SQUAD

These are salaried personnel who have been trained in and hold valid certificates in First Aid and/or CPR. Typically there are 20 persons qualified and current in both disciplines.

7.5 PLANT EQUIPMENT EMERGENCY SQUAD

In case of an emergency, the Plant Engineer will direct this emergency squad to stand by their assigned locations to cutoff such services as necessary to the affected areas. Those services to be considered are:

7.5.1 Ammonia Tank

- Main shut-off valve located outside by tank
- Purge inside lines in Heat Treat

7.5.2 LOX Tank

- Main shut-off valve located outside by tank
- Purge inside lines in Service and Repair

7.5.3 CO2 Tank

- Main shut-off valve located outside by tank
- Purge inside lines in Test Equipment Lab. #1

7.5.4 Natural Gas

- Main shut-off valve located in Boiler Room

7.5.5 Steam Lines

- Main shut-off valves (3) located in Boiler Room on second floor

7.5.6 Nitrogen Tank

- Main shut-off valve located outside on back dock by Oil House overhead door

7.5.7 Domestic Water

- Main shut-off valves (5) - (4) in Office Supply Room & (1) in New Engineering Janitor Closet

7.5.8 Sprinkler Lines

- Section valves located outside of building. All clearly marked. Check alarm panel in Guard House for location and number of Sprinkler Line discharging. Stand by for instructions.

7.5.9 Electrical Power

- Supervision shall be responsible for shut down of equipment in their area under the direction of the Plant Engineer
- (3) Main Transformer shut-off switches. One (1) located outside behind Maintenance Department for west-end of Plant. Two (2) are located on the Mezzanine by the Assembly Department. The transformer secures the east-ent of the Plant and the switch behind the transformer secures Engineering. Make sure Emergency Generators are running.

8. FACILITY EMERGENCY EQUIPMENT

Because of the diversity of processes, a variety of equipment is maintained to combat emergency needs. The description of these items and equipment are contained herein with their location shown on the Facility layout in Figure 2 and identified by the appropriate item designator.

8.1 MEDICAL/FIRST AID

Staffed by a Nurse or person who has received First Aid and CPR training. Facilities include blankets, wheelchair, stretcher, wheeled cart, examining rooms, portable emergency oxygen supply, shower, bathroom, two (2) separate telephone lines, etc. A large conference room immediately across the hall is available for patient overflow.

8.2 PHYSICIAN

A local physician is under contract and on call for emergency situations.

8.3 HOSPITAL

Mercy Hospital with complete emergency facilities is 1.1 miles from the plant.

8.4 FIRE DEPARTMENT

The Davenport Fire Department has a station 0.8 miles from the plant.

8.5 FIRE SUPPRESSION-SPRINKLERS

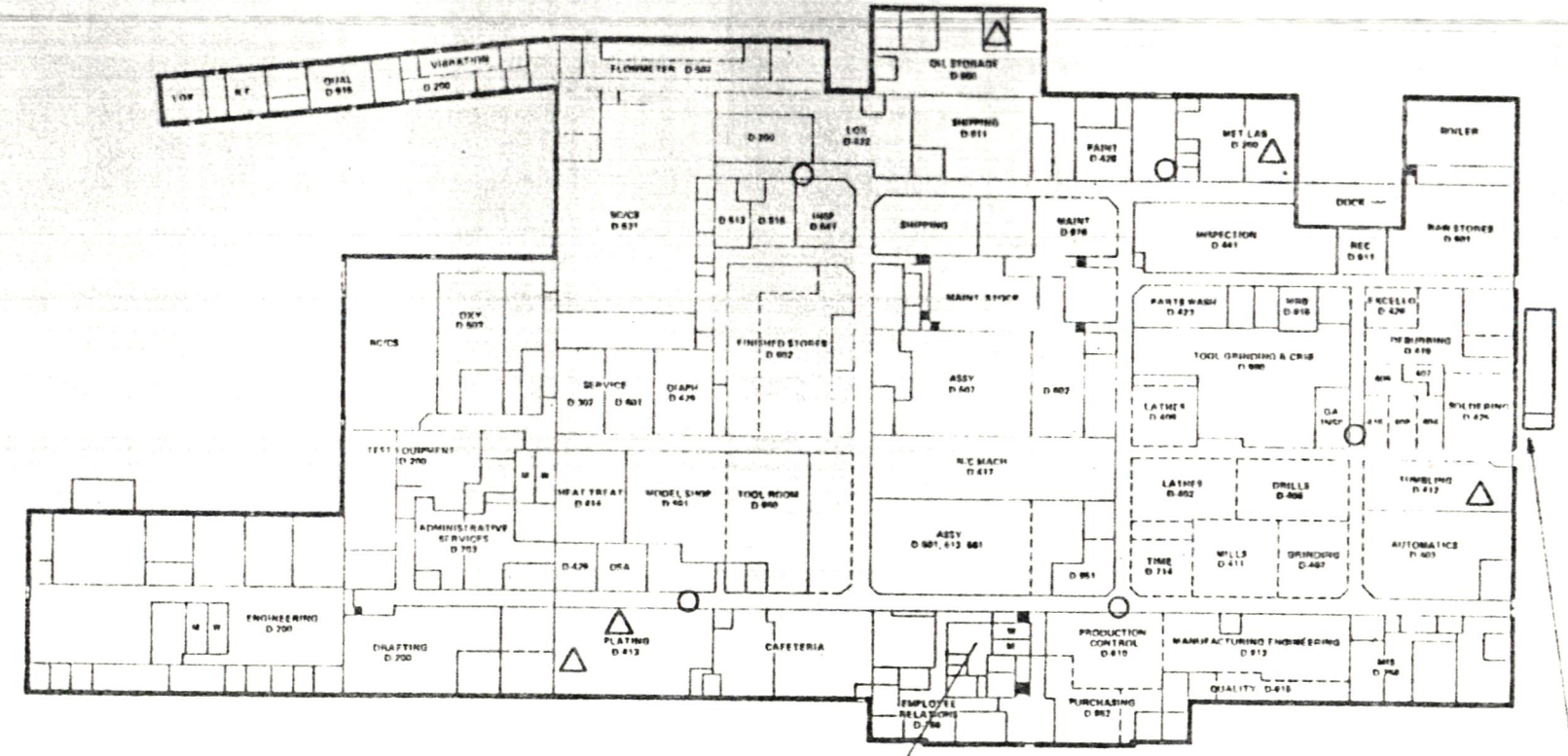
The entire facility is water sprinklered, with annunciators located in the guardhouse. The Data Processing area also has a Halon® system in the computer room. The paint mixing room, flowmeter building, and some Heat Treat Processes have CO_2 systems.

8.6 FIRE SUPPRESSION - EXTINGUISHERS

There are approximately 200 fire extinguishers located throughout the facility. These are both strategically and randomly placed to effect the best overall protection and are shown in Figure 3.

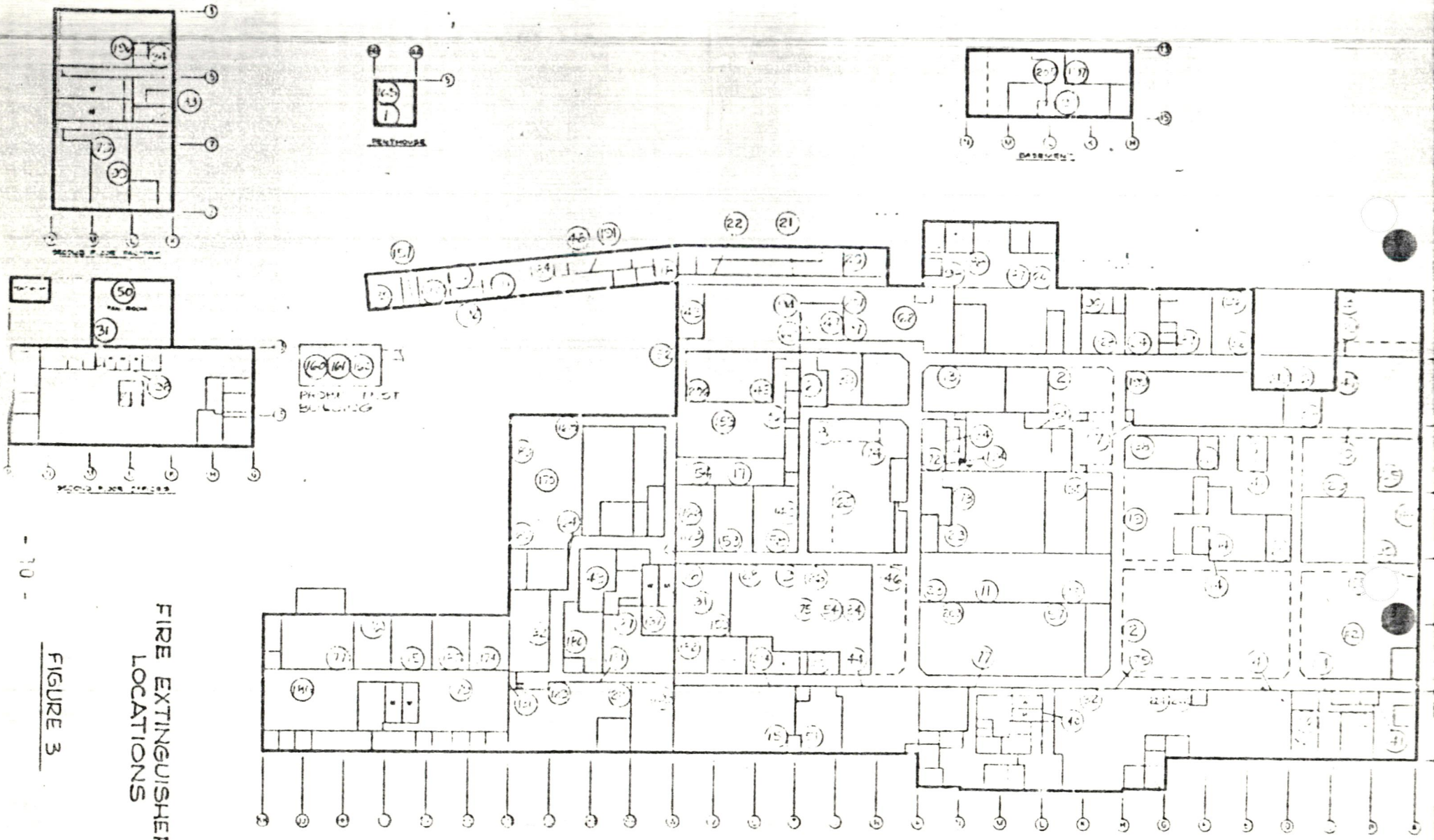
8.7 TELEPHONES

Several telephones are located throughout the facility. They all have a sticker listing the numbers to call for emergency First Aid and Fire response. In the event of a power outage, certain key telephones are equipped to be supplied with emergency power. All telephones have direct access to a plantwide PA system.



FACILITY EMERGENCY EQUIPMENT

FIGURE 2



FIRE EXTINGUISHER LOCATIONS

FIGURE 3

9. FACILITIES SHUTDOWN PROCEDURE

9.1 PURPOSE

The shutdown procedure will provide an orderly shutdown of equipment and utilities, such as gas, electricity, and water. This procedure will prevent damage to equipment and the physical plant and reduce the time required to resume production after an emergency.

9.2 WORK STOPPAGE (Long-Term Pre-planned)

Each department supervisor will be responsible for securing, oiling and greasing all machine surfaces and equipment in his areas of responsibility.

The plan maintenance assigned group will secure all plant generating equipment with the exception of heat, water and main electrical power as follows:

- Minimal heating and cooling will be required throughout shutdown to prevent sprinkler pipe freezing, mildew, moisture accumulation, etc.
- Compressed air will remain activated with one compressor running
- Open all unused machinery power circuits

9.3 INTERNAL FLUID OR GASES FLOODING

The probable causes of flood damage are as follows:

- Pipe failure (water main, gas, ammonia, steam, oxygen, CO_2, nitrogen, etc.) In the event of a serious ammonia discharge, the area will be evacuated and the Davenport Fire Department called.
- Sprinkler operation or malfunction
- Sump pump failure

The Plant Engineer will establish a plant equipment squad from within the plant maintenance personnel. When the Plant Engineer is notified of a flood emergency, he will dispatch the appropriate group to the affected area. Their duties are as follows:

- Secure all equipment in the affected area
- Remove all equipment and material that could be affected
- Determine the cause of flood and take steps to make corrections
- Clean up the area and replace equipment to resume operations

9.4 FIRE AND EXPLOSION

This action plan is based upon the assumption that the emergency has occurred without prior warning and requires a general approach to isolate the affected area.

- The Emergency Coordinator and/or his designee, shall be called who, in turn, will call the appropriate emergency organization as necessary
- The plant engineering assigned groups will shut off gas, oil, steam, oxygen, nitrogen, air lines, etc., feeding the affected area
- Leave lighting on as far as practical but isolate electrical circuit locally if possible. If a large area is involved, isolate circuits at switch gear.
- Turn ventilation systems off
- Remove work in process, tools, etc., if possible
- Protect surrounding area with standby brigade with fire extinguishers ready
- Work with fire department to bring the affected area under control
- The assigned maintenance group will protect against water damage by use of tarpaulins, plastic drop cloths or other drying procedures
- Ventilate as required

9.5 TORNADO OR SEVERE STORM

The immediate action that employees take as a tornado approaches can determine whether they escape unharmed or suffer injury. As a standard rule, all employees should be instructed to stay away from windows and seek their designated tornado shelter.

9.5.1 TORNADO WATCH

During time of severe weather, the Weather Bureau will issue a tornado watch on local radio stations. This information will specify the area covered and establish a period of time during which a tornado is probable. The radio in the guardhouse will be tuned to a local station to receive tornado information.

If a tornado watch is in effect for this area, the Emergency Coordinator will designate a lookout. If it appears that the division is in the path of a tornado, the guard on duty will immediately notify the Emergency Coordinator or his designee who in turn will authorize issuance of a public address announcement that all employees should go to their designated tornado shelters.

9.5.2 TORNADO SHELTERS

The designated tornado shelters (Figure 4) are as follows:

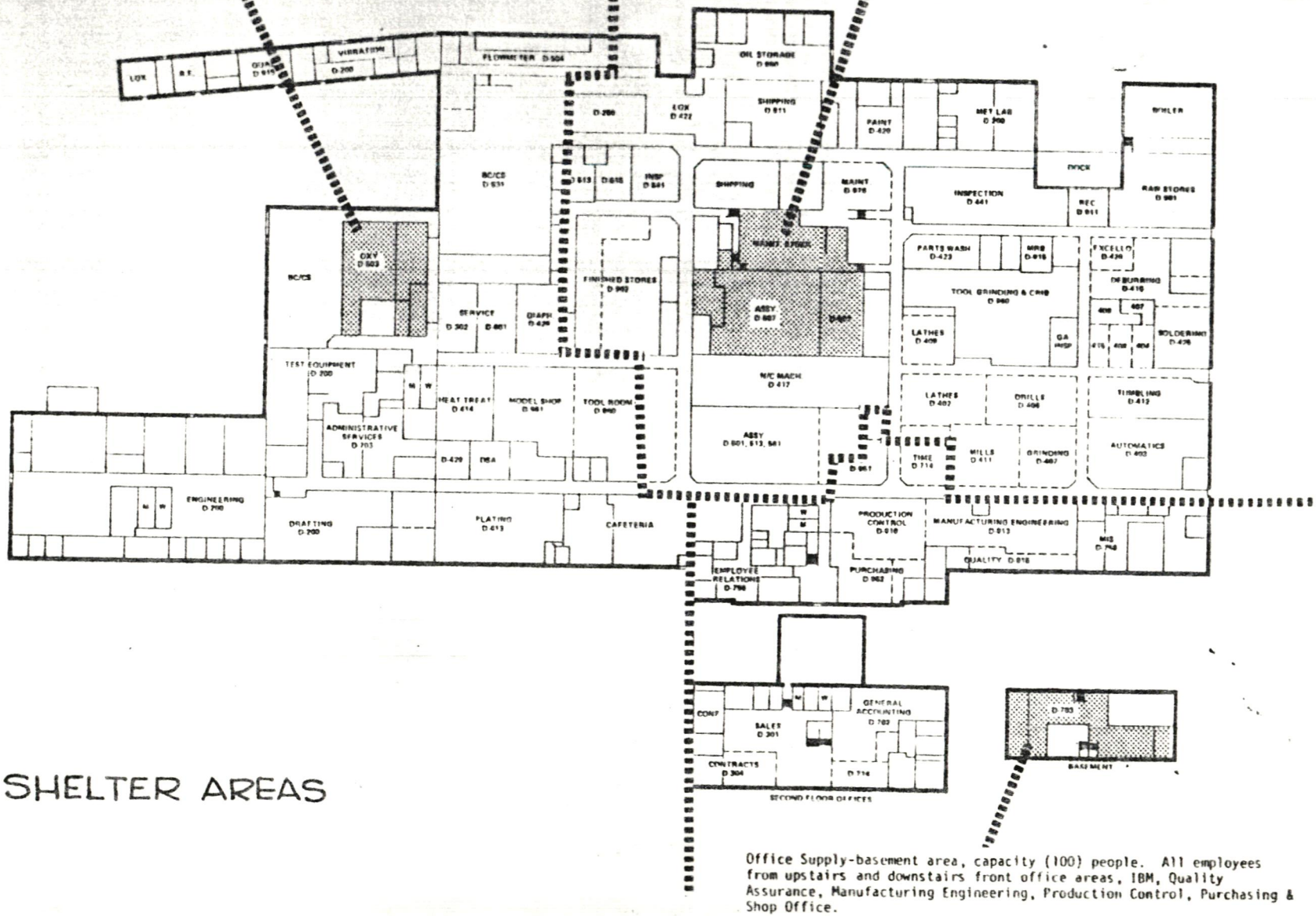
- Assembly Departments 507 and 509 - gold room, capacity (300) people. All employees from Fabrication, Final and Gage Inspection, Shipping and Receiving, RMI, Touch Up, Finished Stores, Maintenance, Tool Grinding & Crib, Raw Stores, Met Lab, and Departments 501, 502, 507, 509, 513.

- Assembly Department 503 - white room, capacity (200) people. All employees from Engineering, Administrative Services, Service & Repair, Cafeteria, Model Shop and Tool Room, and Departments 413, 414, 429, 503, 504, 531.

- Office Supply-basement area, capacity (100) people. All employees from upstairs and downstairs front office areas, IBM, Quality Assurance, Manufacturing Engineering, Production Control, Purchasing & Shop Office.

Assembly Department 503 - white room, capacity (200) people. All employees from Engineering, Administrative Services, Service & Repair, Cafeteria, Model Shop and Tool Room, and Departments 413, 414, 429, 503, 504, 531.

Assembly Departments 507 and 509 - gold room, capacity (300) people. All employees from Fabrication, Final and Gage Inspection, Shipping and Receiving, RMI, Touch Up, Finished Stores, Maintenance, Tool Grinding & Crib, Raw Stores, Met Lab, and Departments 501, 502, 507, 509, 513.



Office Supply-basement area, capacity (100) people. All employees from upstairs and downstairs front office areas, IBM, Quality Assurance, Manufacturing Engineering, Production Control, Purchasing & Shop Office.

FIGURE 4

SHELTER AREAS

Litton

10. RELEASE OF HAZARDOUS WASTE IN STORAGE AREA

10.1 PURPOSE

Wastes classed as hazardous waste (HW) are identified in 40 CFR Part 261 on the basis of one or more of the following characteristics: Corrositivity, Ignitibility, Reactivity, EP Toxicity, Acute HW, or Toxicity. HW at ILSD are identified by the EPA HW numbers F001, F003, F005, F007, F008, D002 & D005. These HW are collected in their designated areas and stored until being removed by a qualified waste hauler. HW may be consolidated/mixed into the following groups - Chlorinated Solvents (F001); Thinners (F003, F005); Spent Plating Baths & Sludges (F007, F008); Spent Plating Baths (D002); and Spent Plating Baths (D005). Action necessary in the event of an unexpected release of any of these is described herein. The action shall be initiated by the Emergency Coordinator or an authorized designee.

10.2 FIRE OR EXPLOSION

10.2.1 Evacuation. In accordance with paragraphs 5 and 13 of this Plan, Supervisors in the immediate area shall be responsible to direct the evacuation of any employees in the immediate area and promptly notify the Emergency Coordinator.

10.2.2 Notification. After the Emergency Coordinator has been notified he shall assess the nature and extent of the emergency in accordance with 40 CFR 264.56. If necessary and as appropriate, he shall telephone those organizations listed in Section V of Policy E-2. Their various responsibilities are noted in paragraph 7 of this plan. A written report form, as shown on Page 21 of this Contingency Plan, shall be submitted within 15 days of the incident.

10.2.3 Emergency Equipment. Generally the equipment required will be the responsibility of the responding organization. However, certain items will be maintained for use. These items will include: overhead sprinkler, dry chemical extinguishers, and boots, gloves and garments.

10.2.4 Clean Up. The method is cleanup will have to be determined in relationship to what has been released when the fire has been extinguished. The Emergency Coordinator shall determine what has been released and to what extent. Insofar as possible, cleanup would proceed according to the specific steps noted in Section 10.3. Intact containers of hazardous wastes will be examined for damage and/or leaks and the materials transferred to suitable containers where applicable.

Litton

10.3 UNEXPECTED INDIVIDUAL RELEASE

Chemically inert absorbents will be used to pick up liquid spills in the hazardous waste storage area. The sorbent material plus the absorbed material will then be placed in a properly labeled container. It should be noted that there is no large bulk storage of the liquid hazardous wastes at this facility. The wastes will normally be 55 gallon containers, so the likelihood of a large spill is remote.

10.3.1 Chlorinated Solvents. The released material shall be contained in the smallest practical area by use absorbent in order to reduce any run off and/or evaporation. The absorbed waste and absorbent shall be placed in a approved container and properly identified. Protective respiratory equipment, such as NIOSH approved cartridge respirators, organic vapor will be available for operators performing this task.

10.3.2 Thinners (Flammable Solvents). These materials are volatile and flammable. They shall be contained and absorbed and placed in a sealed container. Extreme care shall be used to prevent the generation of sparks during the cleanup operation. Protective respiratory equipment, such as NIOSH approved cartridge respirators, organic vapor will be available for operators performing this task.

10.3.3 Spent Plating Baths and Sludges. Spilled material may be contained by using absorbent material. Identify the material spilled. Contained spilled liquid may be placed in a suitable container and the residual taken up with absorbents. Operators may require gloves, boots and eye protection during this task. A supply of running fresh water should be available in case of accidental contamination of the operator.

10.3.4 Spent Acids. Same as 10.3.3. Note: Area may be sprinkled with sodium bicarbonate after bulk of spill is cleaned up. Depending on the material, neutralized residual may be flushed with water and absorbed or discarded as applicable.

10.3.5 Heat Treat Salts. These are solid materials. Any unexpected release will be shoveled into containers.

Litton

11. VITAL RECORD PROTECTION

Vital records are those records identified by department heads as vital to the recovery of the plant operation after an emergency. These vital records are to be protected in the following manner.

- Each department shall designate a vital records custodian. He shall be responsible for properly caring for the vital records and may assist in their removal in the event of an emergency.
- A listing of vital records is to be maintained by department heads and reviewed at least annually and updated.
- All vital records not kept in fireproof safes or vaults will be maintained in specifically designated files or cabinets which will be identified by a label reading "Vital Records - Remove in Emergency". Labels are available from the Emergency Coordinator.
- A list of such designated files or cabinets and their locations is to be maintained in each department and two copies are to be maintained in the security office; one copy is to be used by the plant Emergency Coordinator and one by the assigned maintenance group.
- Plant Engineering is responsible for the removal of vital records. The nature of the emergency will determine the extent to which the assinged maintenance group will remove the records from offices to other areas. Temporary storage location will be determined at the time of the incident.
- Engineering-released drawing originals will be stored in a fireproof vault located near the quality department. These drawings are microfilmed and a duplicate set stored in the vault and one set is in Engineering.

12. DATA PROCESSING AND COMPUTER PROTECTION

This procedure is for pre-planning for continued operations in an emergency.

12.1 Personnel Training

- Personnel in the data processing department are trained in the use of portable fire extinguishers. Training classes will be held periodically at which time new employees are instructed.

- It is the function of the employees in the data processing and computer department to assist in time of fire or emergency, and to notify the emergency coordinator who in turn will call for additional assistance.

- Supervision of the data processing area is trained in shutting down of air conditioning equipment and electrical power to the computer system. The main power shutoff is located in the data processing department and immediately outside of the area.

12.2 Data Processing Record Protection

A duplicate set of reference records considered necessary for quick recovery of the system in the event of loss of the current records are stored in an adjacent vault in both tape and disc format.

12.3 Arrangement for Emergency Use of Other Installed Computer Equipment

- A mutual aid agreement has been formulated for the emergency use of the computer equipment at the REA Power Plant in Wilton, Iowa.

- Plans have been made for the transportation of personnel, data and supplies to emergency computer locations. Available division vehicles will be used for this purpose. If additional transportation is required, vehicles will be rented or employees will use their own cars.

- Removal of the records and any cleanup necessary will be accomplished by the assigned maintenance group and the departmental employees.

13. EVACUATION

Four types of evacuation are contemplated. Emergency exits are shown in Figure 5 and are posted conspicuously throughout the plant.

- Type 1 - Evaucation of a particular area due to a small fire or suspected gas leak, etc. This type can be authorized by the immediate supervisor in the area.

Types 2, 3 and 4 will be authorized by the Emergency Coordinator.

- Type 2 - Evacuation of plant employees to wait in the parking lot for further instructions. All employees will be directed to leave the plant by the nearest exit.

- Type 3 - Evacuation of the plant. Employees to proceed to their homes. Personnel will be directed to leave the plant by the exits normally used in order to be near their cars.

- Type 4 - Evacuation to shelter area. Normally this would result from advice from the weather bureau or civil defense officials.

DRAW A RED LINE TO
YOUR NORMAL LOCATION.

YOU ARE HERE

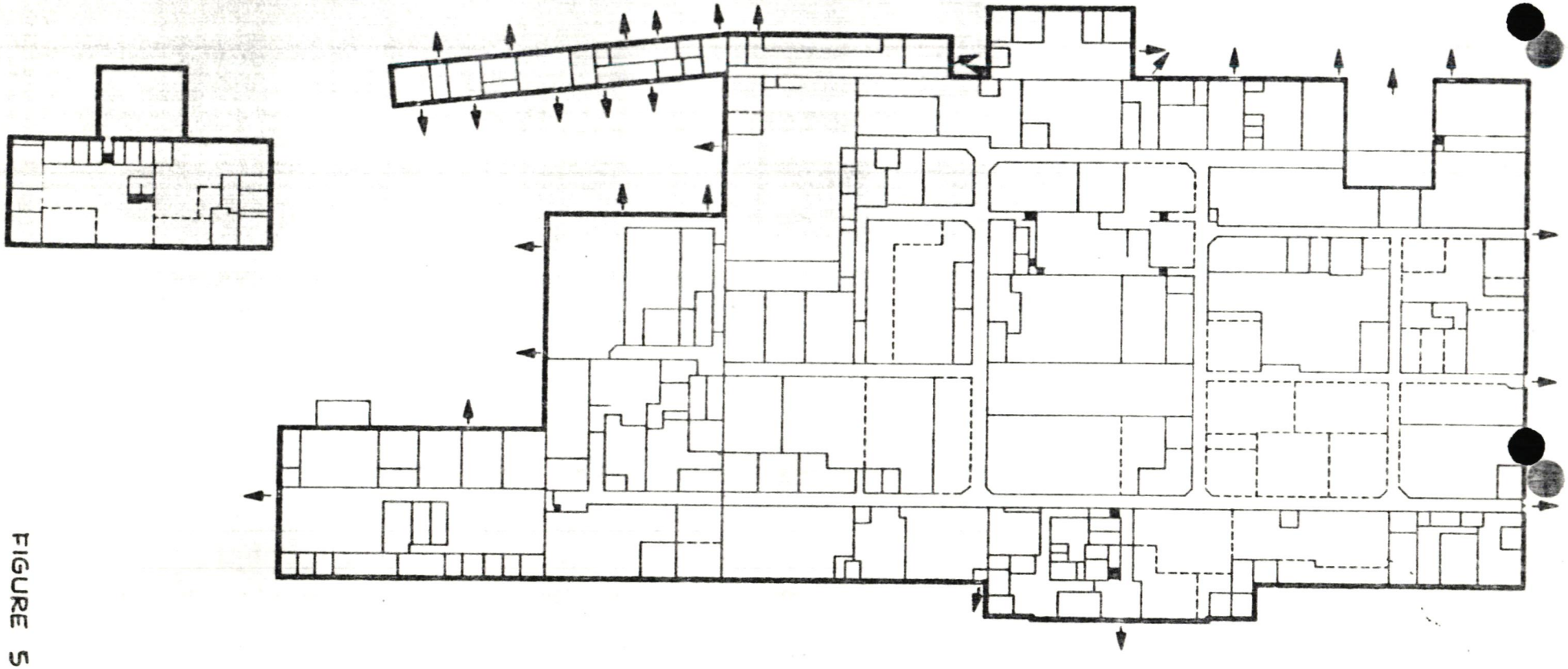


FIGURE 5

EMERGENCY EXITS — BUILDING #1

A5950-163

14. RESUMING PRODUCTION

The resumption of production after a shutdown will depend largely on the reason for the shutdown. Restoration of damage to the facilities will be accomplished by the plant engineering department with the aid of outside contractors as required.

In the event of a fire, an explosion, or an unplanned release of hazardous wastes to the air, soil or surface water that could threaten health or the environment, the Manager of Safety and Security shall:

(a) Determine that cleanup has been proper and is complete.

(b) Determine that all emergency equipment has been restored before permitting resumption of operations.

(c) Notify the regional administrator in writing, within 15 days, including the information indicated on the sample form, Figure 6.

15. EMPLOYEE RECALL

The Director of Employee Relations will be responsible for the recall of employees after an emergency shutdown. Such recall shall be by all means available including:

- Telephone
- Telegraph
- Messenger
- U.S. Mail
- Radio
- Television

Litton

EMERGENCY EVENTS REPORTING FORM

TO: U.S. Environmental Protection Agency
Region VII
324 East Eleventh Street
Kansas City, Missouri 64106

Owner/Operator

Litton Systems, Inc.
Clifton Precision
Instruments & Life Support Division
Marple & Broadway Streets
Clifton Heights, Pennsylvania
R. Edward Fisher
Tel. (215) 622-1000

Facility

Clifton Precision
Instruments & Life Support Division
2734 Hickory Grove Road
Davenport, Iowa
EPA I.D. No.: IAD005268420
Paul E. Bohnsack
Tel. (319) 383-6293
Tel. (319) 355-7814

1. Date, time, and type of incident:

2. Name and Quantity of material(s) involved:

3. Extent of injuries (if any):

4. Assessment of actual or potential hazards to human health or the environment:

5. Estimated quantity and disposition of material recovered from incident:

Copies to:

Iowa Department of Water, Air and Waste Management

Main Office
Henry A. Wallace Building
900 East Grand
Des Moines, Iowa 50319
Tel. (515) 281-8694

Regional Office #6
P.O. Box 27
Washington, Iowa 52353
Tel. (319) 653-2135

95

BOMB THREAT ACTION PLAN

APPENDIX I

Harassment through bomb threat is a potential hazard in any business or industrial facility. The actual placement of explosive devices is an unlikely prospect but nevertheless a real one. Regardless of how remote the possibility might seem, prudence suggests we be prepared for such an eventuality.

The attached outline of a plan of action provides guidelines for an orderly response to a bomb threat. This plan may be modified or supplemented from time to time.

Litton

BOMB THREAT ACTION PLAN

Upon receipt of a bomb threat, attempt to maintain contact with the informant as long as possible. Maintain a calm attitude. Studies have shown that only .42% of all actual and attempted bombings were preceded by phone calls giving advance notice. Likewise, very few actual bombings follow bomb threats.

Remember, what the bomb caller wants is maximum disruption and panic. If he could not accomplish this, he would not call. However, a determination must be made if a bombing seems like a solid possibility.

The performance of the person who receives the bomb threat helps make this determination by the information obtained from the caller by using the following check list.

1. Note the sex.
2. Estimated age.
3. Race, if possible.
4. Speech impediment.
5. Accent.
6. Tone of voice.
7. Attitude.
8. Peculiar mannerisms of speech delivery.
9. Background noises.
10. Ask the caller his/her name.
11. Ask where the bomb was placed.
12. Ask why the bomb was placed.
13. Ask if she/he ever worked here.
14. Does she/he know anyone here.

The purpose is to keep him/her talking as long as possible.

Litton

Give this information immediately to the Security Officer or the Director of Employee Relations.

The Security Officer or Director of Employee Relations will notify the General Manager. The General Manager will evaluate the known facts and decide on whether to effect a partial or general evacuation or to instruct a search to be made without evacuation. (In the absence of the General Manager, the decision will be reached with the Director of Manufacturing and/or the Director of Employee Relations.

If it is determined that a search is to be made, all Senior Department Heads will be notified and then be responsible for a search in their respective areas.

Observe the following procedure when making a search:

A. Pay particular attention to:

1. Lockers.
2. Closets, including janitor and equipment closets.
3. Trash containers.
4. Rest rooms.
5. Outer walls of the building.
6. Power supply.
7. Boiler rooms.

B. Precautionary measures for Mail Room personnel and Receiving clerks, etc. Be alert for suspicious looking packages, oddly addressed boxes or objects that appear out of place. Report anything unusual to your supervisor or the Security Officer.

C. If you locate a suspicious looking box or device - DO NOT TOUCH, MOVE OR JAR THE OBJECT OR ANYTHING ATTACHED THERETO.

D. Isolate the affected area.

E. Deny access to the affected area.

F. If feasible, request maintenance personnel to shut off vital utility lines in proximity of the device.

G. If the suspected explosive device is found, immediately notify the Security Officer who will notify the General Manager for evacuation approval.

The Security Officer will make appropriate notification to:

1.	Davenport Fire Department	Tel. (319) 322-4473
2.	Davenport Police Department	Tel. (319) 326-7911
3.	Bomb Disposal Unit Ft. Sheridan, Illinois	Tel. (312) 926-2081
4.	Defense Logistics Agency Personnel	Tel. (319) 383-6312

(TYPICAL COORDINATION AGREEMENT LETTER)

Date_____

Mr. Paul E. Bohnsack
Manager-Safety & Security
Clifton Precision
Instruments & Life Support Division
P.O. Box 4508
Davenport, Iowa 52808

Dear Mr. Bohnsack:

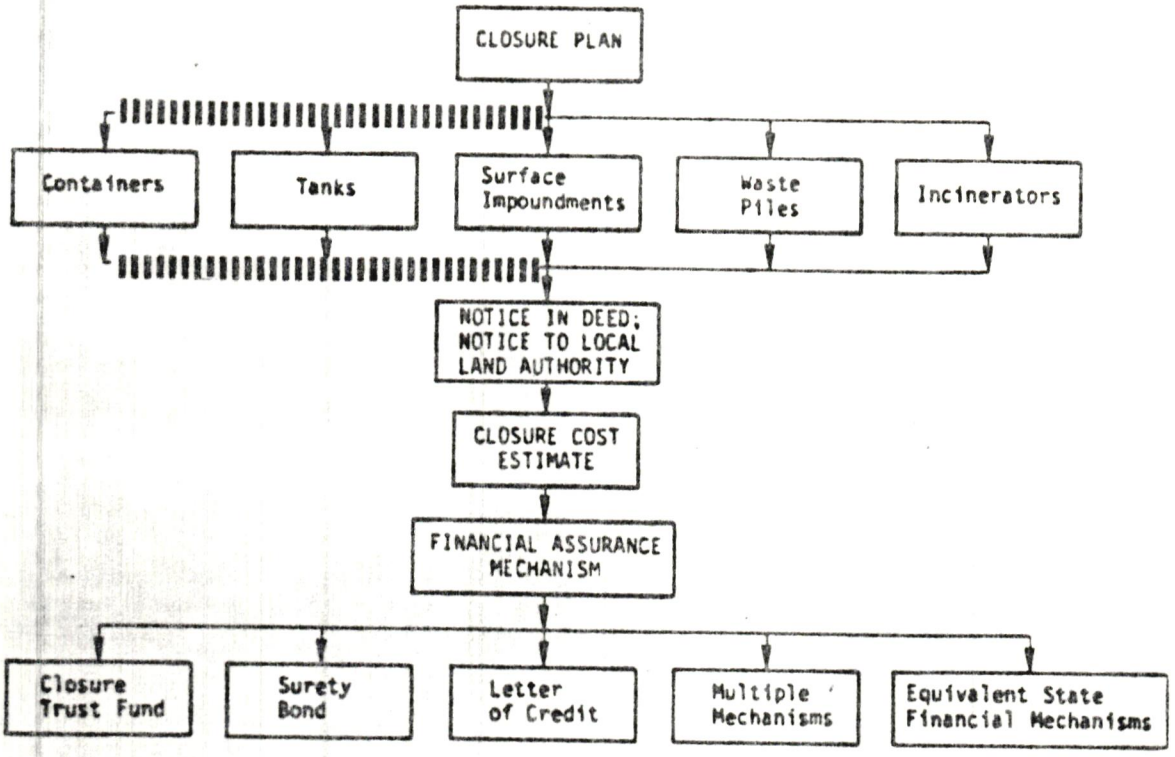
We have received the Emergency Plan submitted with your letter of . The document has been reviewed and is on file in our office should we ever need to respond to an emergency related to your facility.

We agree that the Davenport Fire Department shall have the primary emergency authority to direct the actions of the responding service organizations.

Sincerely,

Attachment V

Closure Plan and Cost Estimate



TAB I - closure plan flowchart

▮▮▮▮▮▮▮ - I&LSD path

tton Instruments & Life Support Division

2734 Hickory Grove Road, P.O. Box 4508, Davenport, Iowa 52808 319-383-6000

15 Mar 1984

HAZARDOUS WASTE CLOSURE PLAN

This plan was developed pursuant to provisions of Federal Regulations for the Resource Conservation and Recovery Act (Reference Federal Register, 40 CFR, Part 264, Subpart G.) It has been designed to identify the steps necessary to close hazardous waste management facilities in a manner which controls, minimizes, or eliminates hazardous material escape to the environment and minimizes the need for further maintenance.

This plan has the approval of Corporate and Divisional management at levels necessary to commit the necessary resources.

15 Mar 1984

HAZARDOUS WASTE CLOSURE PLAN

CONTENTS

15 Mar 1984

HAZARDOUS WASTE CLOSURE PLAN

I. REGULATORY REQUIREMENTS - BACKGROUND

Federal Regulations (40 CFR, Part 264) promulgated pursuant to the Resource Conservation and Recovery Act (RCRA) require development of a closure plan for all facilities which treat, store, or dispose of hazardous waste and which are regulated by the Act.

An annually updated closure plan is to be kept on-site until submittal to the Environmental Protection Agency (EPA) 180 days prior to commencement of final closure.

Iowa Department of Water, Air and Waste Management Rules (Chapter 45 - Part 400) incorporate by reference 40 CFR, Part 264 and therefore do require a closure plan from plants which store wastes generated on-site. The intent of this document is to also satisfy current requirements under state regulations. A closure cost estimate has been developed as required under 40 CFR, Part 264, Subpart H.

II. OBJECTIVE AND ENVIRONMENTAL ASSESSMENT OF CLOSURE

General regulatory requirements state that a closure plan must identify the steps necessary to close regulated hazardous waste facilities in a manner which protects human health and the environment. Closure must control, minimize, or eliminate hazardous wastes or hazardous waste constituents released to groundwater, surface waters, or air. All hazardous wastes will be removed from the facility before closure.

The Closure Plan for the Instruments & Life Support Division is intended to ensure that those hazardous waste facilities located on-site and identified for permitting under federal and state regulations are closed in an environmentally acceptable manner. These facilities are identified under TAB A, TAB C and TAB D of this Permit Application.

There will be no environmental impact resulting from closure of these facilities. Hazardous material will be recycled, sold, or disposed of as hazardous waste. All hazardous wastes will be removed from the site for disposal by licensed hazardous waste subcontractors. No post-closure care will be required.

Closure of the facilities will be accomplished with all necessary precautions taken to ensure the safety of all personnel involved and to protect the environment. The facilities' closure will not present any hazards to health or environment.

III. CLOSURE SCHEDULE

Pursuant to requirements under RCRA (40 CFR, Part 264), the Instruments & Life Support Division Closure Plan shall notify EPA at least 180 days prior to commencement of closure. See schedule on Page I-6.

After receiving or generating the last waste materials, all on-site hazardous wastes will be tested and removed from the site prior to but no later than closure which will be completed within 180 days. Past experience with analytical testing laboratories and waste haulers indicates that additional time may be necessary to complete this activity. Any exceptions shall be approved through EPA.

Hazardous waste management at the Instruments & Life Support Division consists of handling, and temporarily storing only on-site generated wastes from production processes until final disposition can be made. The storage capacity is shown on Page I-7. This facility does not have a defined lifespan however a closure date of 2012 is projected at the present time. It is anticipated that closure will be total and permanent when it does occur.

Litton

15 March 1984

Closure Schedule

Days	Operation
-360	Notify EPA of expected closure and submit closure plan.
-180	Receive final volume of Wastes and Commence Closure.
-165	Begin necessary testing of hazardous waste inventory.
-150	Begin shipment of hazardous waste inventory.
-120	Test results received. Begin necessary container decontamination.
-90	Complete shipment of hazardous waste inventory.
	Begin shipment of container rinse wastes.
0	Container rinse waste shipments completed. Closure completed.
+15	All manifests received.
+30	P.E. Certification received.
+45	Closure Certification to Regional EPA Administrator.

WASTE MANAGEMENT FACILITIES

Name/Description	Waste	Capacity (55 gal. drums)	
		Maximum (closure)	Normal Operations
Hazardous Waste Storage Building	Plating Waste	30	15
	Waste Solvents	60	20
	Waste Acids	70	15
	Waste Oxidizers	10	5
	SUB-TOTAL	170	55
	Contingency Space	40	155
	TOTAL	210	210

The final schedule will include the date when hazardous waste shall last be generated and the date when closure shall be completed. Dates of major steps will be included. Section IV, Closure Procedure, contains the sequence of major steps to be performed and estimated time intervals. The majority of the closure operations are of a cleaning type and will be conducted simultaneously.

IV. CLOSURE PROCEDURE

A. CONTAINER STORAGE AREAS

1. Empty hazardous waste containers that are to be reused, salvaged, or deposited in sanitary landfills shall have all residues removed and shall be triple rinsed with the appropriate solvent.
2. All other containers that are filled with Hazardous Wastes will be disposed of in a permitted hazardous waste landfill or processed by a licensed disposer.
3. Any residues in the storage areas themselves will be removed and disposed of properly. Nothing that would require soil testing or removal is a part of this plan.

B. ANCILLARY EQUIPMENT

All contaminated equipment used at the various hazardous waste facilities will be decontaminated, where possible, or disposed of as solid hazardous waste by a licensed waste disposal contractor.

Areas which will need to be considered for decontamination are:

Plating Department
In-process solvents in both Fabrication and Assembly area
Vapor Degreasers

Decontamination for these shall be accomplished in the following manner and all barrels will be labeled according to the contents of the container being emptied.

1. Plating tanks - Original contents will go into barrels. Sludge will also go into barrels. Tanks will be triple rinsed and the rinse water will go into barrels. This action applies only to those tank contents that contain hazardous wastes.

2. In process solvents in small waste containers in the fabrication and assembly areas will be transferred to the appropriate collection barrels in the stroage area. The small containers will be triple rinsed with clean solvent and the residual again will be placed in the appropriate collection barrels.

3. Vapor degreaser liquids and sludge will be placed in barrels. The tanks will be triple rinsed and the rinse emptied into barrels.

V. CERTIFICATION OF CLOSURE

When closure is completed, Instruments & Life Support Division will submit to the Regional Administrator certification both by the Instruments & Life Support Division and by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

VI. CLOSURE COST ESTIMATE (1982 dollars)

A. Containers	
1. Collection of waste inventory	
a. Empty drums for filling (120 @ 15.00)	$ 1,800
b. Labor - filling drums (300 hours @ 14.00)	4,200
c. Testing analysis samples - labor and shipping	600
d. Solvents for decontamination (55 gal. @ 2.00)	110
e. Absorbent	400
f. Overpack drums (4 @ 90.00)	360
2. Removal of waste inventory	
a. Labor (160 hours @ 14.00)	2,240
b. Hauling and disposal (170 drums @ 15.00)	25,500
B. Closure Certification	$ 2,850
C. Sub-Total	$38,060
1. Plus 17.5% Administration	6,661
2. Plus 15% Contingencies	5,709
	$50,430

August 24, 1983 - 1983 dollars

- Updated using 1.06 inflation factor $53,456

HAZARDOUS WASTE FACILITY CERTIFICATE
of
LIABILITY INSURANCE

RECEIVED
MAY 10 1984

X Travelers Indemnity Company
__ Travelers Indemnity Company of America
__ The Phoenix Insurance Company
__ Travelers Indemnity Company of Rhode Island
__ Travelers Indemnity Company of Illinois
__ Charter Oak Fire Insurance Company

One Tower Square
Hartford, Connecticut 06115

hereby certifies that it has issued liability insurance covering bodily injury and property damage to

Name LITTON INDUSTRIES INC

Mailing Address 360 NORTH CRESCENT DR

BEVERLY HILLS CA 90210

in connection with the insured's obligation to demonstrate financial responsibility under 40 CFR 264.147 or 265.147. The coverage applies at

	E.P.A. I.D. NUMBER	NAME	ADDRESS
1.	IAD 005268420	CLIFTON PRECISION	DAVENPORT IA 52804

for:

X sudden accidental occurrences
__ non-sudden accidental occurrences
__ sudden and non-sudden accidental occurrences

The limits of liability are $ 1,000,000 each occurrence

$ 2,000,000 annual aggregate

exclusive of legal defense costs. The coverage is provided under

Policy Number TR-NSL-186T725-7-83

Issued on 08-01-83

The effective date of said policy is 08-01-83

REPLACING CERTIFICATE ISSUED 11-22-83 TO AMEND EPA ID NUMBER AND TO AMEND THE LIMITS OF LIABILITY.

LA-105
05-09-84

(CONTINUED ON REVERSE)

CP - 2852

I-11

110

The Insurer further certifies the following with respect to the insurance described on Page 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 40 CFR 264.147(f) or 265.147(f).

(c) Whenever requested by a Regional Administrator of the U.S. Environmental Protection Agency (EPA), the Insurer agrees to furnish to the Regional Administrator a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the Insurer or the insured, will be effective only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is (are) located.

(e) Any other termination of the insurance will be effective only upon written notice any only after the expiration of thirty (30) days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is (are) located.

I hereby certify that the wording of this instrument is identical to the wording specified in 40 CFR 264.151(j) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

John R. Kenney, Secretary (MH)

John R. Kenney
Secretary, Authorized Representative of the Travelers Insurance Companies
One Tower Square, Hartford, Connecticut 06115

CP - 2852 (Back)

acord CERTIFICATE OF INSURANCE

SET TAB STOPS AT ARROWS

ISSUE DATE (MM/DD/YY): AUGUST 1, 1983

PRODUCER

MARSH & MC LENNAN, INC.
603 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90010

(213) 380-1600

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

CLIFTON PRECISION DIVISION
OF LITTON INDUSTRIES
2734 HICKORY GROVE ROAD
DAVENPORT, IOWA 52804

(EPA NO. IAD 005268420)

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A	FIRST STATE INSURANCE COMPANY
COMPANY LETTER B	
COMPANY LETTER C	
COMPANY LETTER D	
COMPANY LETTER E	

COVERAGES

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS	EACH OCCURRENCE	AGGREGATE
	GENERAL LIABILITY						
	COMPREHENSIVE FORM				BODILY INJURY	$	$
	PREMISES/OPERATIONS				PROPERTY DAMAGE	$	$
	UNDERGROUND EXPLOSION & COLLAPSE HAZARD				BI & PD COMBINED	$	$
	PRODUCTS/COMPLETED OPERATIONS						
	CONTRACTUAL				PERSONAL INJURY		$
	INDEPENDENT CONTRACTORS						
	BROAD FORM PROPERTY DAMAGE						
	PERSONAL INJURY						
	AUTOMOBILE LIABILITY						
	ANY AUTO				BODILY INJURY (PER PERSON)	$	
	ALL OWNED AUTOS (PRIV. PASS.)				BODILY INJURY (PER ACCIDENT)	$	
	ALL OWNED AUTOS (OTHER THAN PRIV. PASS.)				PROPERTY DAMAGE	$	
	HIRED AUTOS				BI & PD COMBINED	$	
	NON-OWNED AUTOS						
	GARAGE LIABILITY						
	EXCESS LIABILITY						
A	X UMBRELLA FORM	EU 936 012	4/15/83	8/1/84	BI & PD COMBINED	$9,000, EXCESS OF $1,000	$9,000,
	OTHER THAN UMBRELLA FORM						
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY		
						$ (EACH ACCIDENT)	
						$ (DISEASE-POLICY LIMIT)	
						$ (DISEASE-EACH EMPLOYEE)	
	OTHER						

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

THIS CERTIFICATE WILL EVIDENCE THE COVERAGE THAT CLIFTON PRECISION HAS UNDER THE CAPTIONED POLICY FOR "SUDDEN AND ACCIDENTAL INCIDENTS" FOR THE ENVIRONMENTAL IMPAIRMENT LIABILITY.

CERTIFICATE HOLDER

THE STATE OF IOWA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

BY: Ronald C. Burke MARSH & MC LENNAN, INC.

I-13

ACORD 25 (2/84)

acord® CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY): AUGUST 1, 1983

PRODUCER

MARSH & MC LENNAN, INC.
3303 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90010

(213) 380-1600

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A INTERNATIONAL INSURANCE COMPANY
COMPANY LETTER B
COMPANY LETTER C
COMPANY LETTER D
COMPANY LETTER E

INSURED

CLIFTON PRECISION DIVISION
OF LITTON INDUSTRIES
2734 HICKORY GROVE ROAD
DAVENPORT, IOWA 52804
(EPA NO. IAD 005268420)

COVERAGES

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS	EACH OCCURRENCE	AGGREGATE
	GENERAL LIABILITY: COMPREHENSIVE FORM; PREMISES/OPERATIONS; UNDERGROUND EXPLOSION & COLLAPSE HAZARD; PRODUCTS/COMPLETED OPERATIONS; CONTRACTUAL; INDEPENDENT CONTRACTORS; BROAD FORM PROPERTY DAMAGE; PERSONAL INJURY				BODILY INJURY	$	$
					PROPERTY DAMAGE	$	$
					BI & PD COMBINED	$	$
					PERSONAL INJURY		$
	AUTOMOBILE LIABILITY: ANY AUTO; ALL OWNED AUTOS (PRIV. PASS.); ALL OWNED AUTOS (OTHER THAN PRIV. PASS.); HIRED AUTOS; NON-OWNED AUTOS; GARAGE LIABILITY				BODILY INJURY (PER PERSON)	$	
					BODILY INJURY (PER ACCIDENT)	$	
					PROPERTY DAMAGE	$	
					BI & PD COMBINED	$	
	EXCESS LIABILITY: UMBRELLA FORM; OTHER THAN UMBRELLA FORM				BI & PD COMBINED	$	$
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY		
						$	(EACH ACCIDENT)
						$	(DISEASE-POLICY LIMIT)
						$	(DISEASE-EACH EMPLOYEE)
A	OTHER: ENVIRONMENTAL IMPAIRMENT LIABILITY	MMS 1885	8/1/83	8/1/84	$3,000,000/OCCURRENCE 6,000,000/AGGREGATE EXCESS OF UNDERLYING		

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

THIS CERTIFICATE WILL EVIDENCE THE COVERAGE THAT CLIFTON PRECISION HAS UNDER THE CAPTIONED POLICY FOR "NON-SUDDEN AND GRADUAL INCIDENTS" FOR THE ENVIRONMENTAL IMPAIRMENT LIABILITY.

CERTIFICATE HOLDER

THE STATE OF IOWA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

BY: Beverly O. Rakus MARSH & MC LENNAN, INC.

I-14

ACORD 25 (2/84)

The Insurer further certifies the following with respect to the insurance described on Page 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 40 CFR 264.147(f) or 265.147(f).

(c) Whenever requested by a Regional Administrator of the U.S. Environmental Protection Agency (EPA), the Insurer agrees to furnish to the Regional Administrator a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the Insurer or the insured, will be effective only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is (are) located.

(e) Any other termination of the insurance will be effective only upon written notice any only after the expiration of thirty (30) days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is (are) located.

I hereby certify that the wording of this instrument is identical to the wording specified in 40 CFR 264.151(j) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

THOMAS W. TILY, MANAGING DIRECTOR
MARSH & MC LENNAN, INCORPORATED

LITTON INDUSTRIES

360 North Crescent Drive, Beverly Hills, California 90210 213 273-7860

November 5, 1983

Regional Administrator's Office
United States Environmental
Protection Agency
Region VII
324 East Eleventh Street
Kansas City, Missouri 64106

Attention: Mr. Lyndell L. Harrington, Chief
Permits Section
Waste Management Branch

Re: EPA I.D. No. IAD 005268420
2734 Hickory Grove Road
Davenport, Iowa 52804

Dear Mr. Harrington:

I am the chief financial officer of Litton Industries, Inc., 360 N. Crescent Drive, Beverly Hills, California 90210. This letter is in support of the use of the financial test to demonstrate financial responsibility for closure costs as specified in 40 CFR 264 and 265, Subpart H of the Resource Conservation and Recovery Act (RCRA).

Certain corporate subsidiaries of Litton Industries, Inc. own or operate facilities which are subject to the provisions of 40 CFR 264 or 265 or substantially equivalent provisions under state law and regulation. The term "guarantor" will be used to describe Litton Industries, Inc. The term "owner or operator" will be used to refer to the subsidiary which is the actual owner or operator, Litton Systems, Inc., a Delaware corporation.

1. The owner or operator identified above owns or operates the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in Subpart H of Sections 264 and 265. The current closure cost estimates covered by the test are shown for each facility:

OWNER OR OPERATOR: LITTON SYSTEMS, INC.

Division Name	Location	EPA No.	Current Estimated Closure Cost
Clifton Precision	Davenport, IA.	IAD 005268420	$ 53,456
Clifton Precision	Murphy, N.C.	NCD 044438406	6,360
Ingalls Shipbuilding	Pascagoula, MI.	MSD 098590615	24,804
Ingalls Shipbuilding	Pascagoula, MI.	MSD 050648757	56,445
	TOTAL		$141,165

2. The guarantor identified above guarantees, through the corporate guarantee specified in Subpart H of 40 CFR Parts 264 and 265, the closure care of the foregoing facilities owned or operated by its subsidiaries. The current cost estimates for the closure care so guaranteed are shown for each facility identified in paragraph 1 above.

3. In states where EPA is not administering the financial requirements of Subpart H of 40 CFR Parts 264 and 265, this owner or operator is demonstrating financial assurance for the closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Subpart H of 264 and 265. The current closure cost estimates covered by such a test are those facilities listed in paragraph 1 above which are located in Mississippi and North Carolina.

4. The owner or operator identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure, or if a disposal facility, post-closure care is not demonstrated either to EPA or a state through the financial test or any other financial assurance mechanism specified in Subpart H of 40 CFR Parts 264 and 265 or equivalent or substantially equivalent state mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: None.

This guarantor is required to file a Form 10K with the Securities and Exchange Commission for the latest fiscal year.

The fiscal year of this owner or operator and the guarantor ends on July 31. The attached Schedule 1, furnished to demonstrate compliance with the ratios required by Section 264.143(f)(1), contains figures marked with an asterisk which are derived from this guarantor's independently audited, year-end financial statements for the latest completed fiscal year, ended July 31, 1983.

I hereby certify that the wording of this letter is identical to the wording specified in Section 264.151(g) as such regulations were constituted on the date shown immediately below except for such revisions as are necessary to indicate the intention of Litton Industries, Inc. to utilize the provisions regarding financial assurances and corporate guarantees to discharge the owner or operator's obligations with respect to closure care only.

Very truly yours,

Joseph T. Casey
Executive Vice President
Litton Industries, Inc.

Dated: November 5, 1983

CORPORATE GUARANTEE

Guarantee made this 10th day of November, 1983 by LITTON INDUSTRIES, INC., a business corporation organized under the laws of the State of Delaware, herein referred to as guarantor, to the United States Environmental Protection Agency, obligee, on behalf of our subsidiary LITTON SYSTEMS, INC., (Clifton Precision Division), of Davenport, Iowa 52804.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 40 CFR 264.143(f), 264.145(f), 265.143(e), and 265.145(e).

2. Litton Systems, Inc. owns or operates the following hazardous waste management facility covered by this guarantee: EPA I. D. NO. IAD 005268420, Clifton Precision Division, Davenport, Iowa 52804. This guarantee is for "closure care."

3. "Closure plans" as used below refers to the plans maintained as required by Subpart G of 40 CFR Parts 264 and 265 for the closure care of the facility identified above.

4. For value received from Litton Systems, Inc., guarantor guarantees to U.S. Environmental Protection Agency that in the event that Litton Systems, Inc. fails to perform closure care of the above facility in accordance with the closure plans and other permit or interim status requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in Subpart H of 40 CFR Parts 264 or 265, as applicable, in the name of Litton Systems, Inc. in the amount of the current closure costs estimates as specified in Subpart H of 40 CFR Parts 264 and 265..

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice fo the EPA Regional Administrator and to Litton Systems, Inc. that it intends to provide alternate financial assurance as specified in Subpart H of 40 CFR Parts 264 or 265 as applicable, in the name of Litton Systems, Inc. Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless Litton Systems, Inc. has done so.

6. The guarantor agrees to notify the EPA Regional Administrator, by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy) U. S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by an EPA Regional Administrator of a determination that guarantor no longer meets the financial test criteria or that it is disallowed from continuing as a guarantor of closure care, it shall establish alternate financial assurance as specified in Subpart H of 40 CFR Parts 264 and 265 as applicable, in the name of Litton Systems, Inc. unless Litton Systems, Inc. has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure, or any other modification or alteration of an obligation of Litton Systems, Inc. pursuant to 40 CFR Parts 264 and 265.

9. Guarantor agrees to remain bound under this guarantee for so long as Litton Systems, Inc. must comply with the applicable financial assurance requirements of Subpart H of 40 CFR Parts 264 and 265 for the above listed facility, except that guarantor may cancel this guarantee by sending notice by certified mail to the EPA Regional Administrator for the Region in which the facility is

located and to Litton Systems, Inc. such cancellation to become effective no earlier than 120 days after receipt of such notice by both EPA and Litton Systems, Inc. as evidenced by the return receipts.

10. Guarantor agrees that if Litton Systems, Inc. fails to provide alternate financial assurance as specified in Subpart H of 40 CFR Parts 264 and 265 as applicable, and obtain written approval of such assurance from the EPA Regional Administrator within 90 days after a notice of cancellation by the guarantor is received by an EPA Regional Administrator from guarantor, guarantor shall provide such alternate financial assurance in the name of Litton Systems, Inc.

11. Guarantor expressly waives notice of acceptance of this guarantee by the Environmental Protection Agency or by Litton Systems, Inc. Guarantor also expressly waives notice of amendments or modification of the closure plan and of amendments or modifications of the facility permit.

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Section 264.151(h) as such regulations were constituted on the date first above written.

Effective Date: November 10, 1983

LITTON INDUSTRIES, INC.

By: _____
George W. Fenimore
Senior Vice President

WITNESSED BY:

_____

40 CFR 264.151 (f)

ALTERNATIVE 1

			1983 Annual Report Page #
1.	Sum of current closure and post-closure cost estimates (total of all cost estimates shown in the four paragraphs above)	$ 141,165	
2.	Total liabilities (if any portion of the closure or post-closure cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4).	$2,169,742,000	p.31
3.	Tangible net worth.	$1,634,951,000	attached
4.	Net Worth	$1,829,661,000	p.31
5.	Current assets.	$2,668,917,000	p.31
6.	Current liabilities	$1,590,635,000	p.31
7.	Net working capital (line 5 minus line 6) . .	$1,078,282,000	p.31
8.	The sum of net income plus depreciation, depletion, and amortization	$ 434,216,000	p.30
9.	Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.)	$1,826,000,000	p.45

		YES	NO
10.	Is line 3 at least $10 million?	X	
11.	Is line 3 at least 6 times line 1?.	X	
12.	Is line 7 at least 6 times line 1?.	X	
13.	Are at least 90% of firm's assets located in the U.S.? If not, complete line 14		X
14.	Is line 9 at least 6 times line 1?.	X	
15.	Is line 2 divided by line 4 less than 2.0?. .	X	
16.	Is line 8 divided by line 2 greater than 0.1?	X	
17.	Is line 5 divided by line 6 greater than 1.5?	X	

* Computed from the financial statements for the fiscal year ending July 31, 1983.

Attachment to EPA Form
40 CFR 264.151(f)
Alternative 1

TANGIBLE NET WORTH: (Line 5)

Net Worth (Line 6)		$1,829,661	p.31 Annual Rpt
Less Intangibles:			
Good will	$188,588		
Patents	3,256		
Other Assets	2,866		
TOTAL INTANGIBLES		(194,710)	
		$1,634,951	

SUM NET INCOME PLUS DEPRECIATION: (Line 8)

Net Income	$231,560		p.30 Annual Rpt
Depreciation	202,656		p.30 Annual Rpt
TOTAL		$434,216	

TOTAL ASSETS: (Line 9)

Note: Figure from page 45 of the Annual Report is for identifiable assets in the United States at year end. This sum does not include the amount indicated as "Corporate Amounts," which are not allocable. This treatment is consistent with the prior year presentation.

Touche Ross & Co.

November 7, 1983

Board of Directors
Litton Industries, Inc.
Beverly Hills, California

We have examined the consolidated financial statements of Litton Industries, Inc. and subsidiary companies ("the Company") for the year ended July 31, 1983 ("the Financial Statements"), and have issued our report thereon dated September 26, 1983. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The Company has prepared documents to demonstrate its financial responsibility under the Environmental Protection Agency's financial assurances regulations, in compliance with 40 CFR 264 and 265, Subpart H. This letter has been prepared to assist the Company in complying with these regulations and should not be used for any other purpose.

The attached copy of a letter dated November 5, 1983, from the Chief Financial Officer of Litton Industries, Inc., Mr. Joseph T. Casey, indicates that certain information has been derived from the Financial Statements. In connection therewith, we have:

1. Compared the amounts in the asterisked lines with amounts contained in the Financial Statements and retested computations, where necessary.

2. Verified that the asterisked amounts agree with, or were computed using, appropriate amounts included in the Financial Statements.

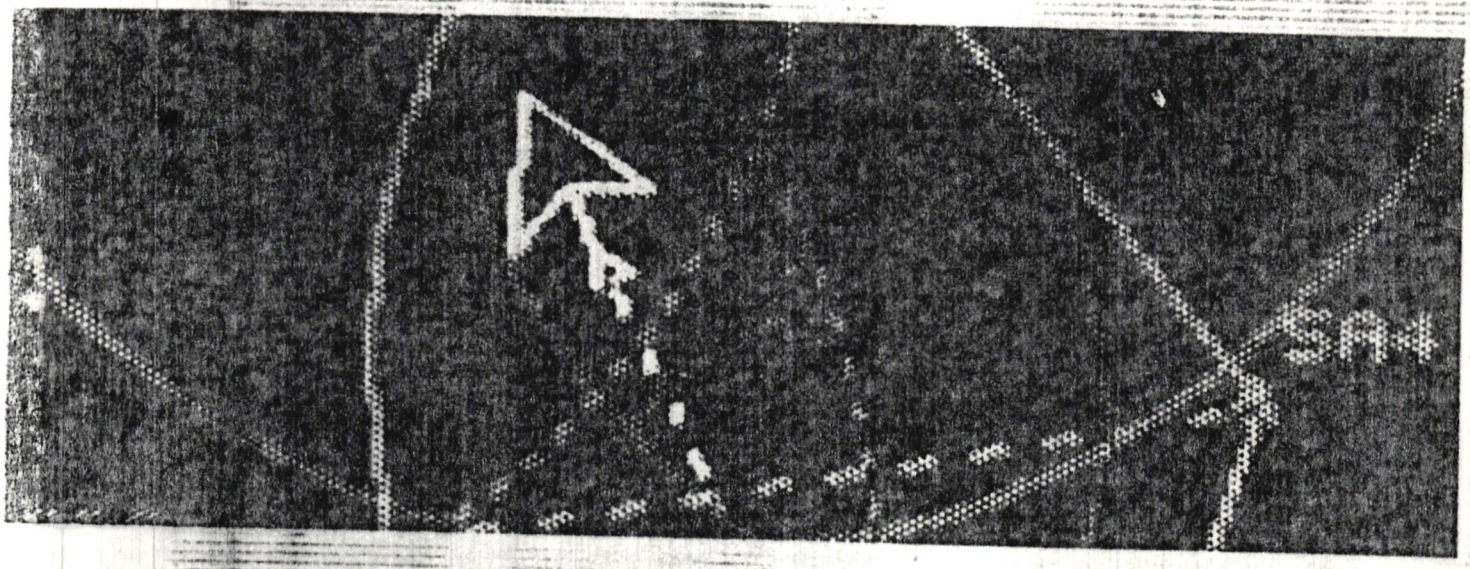
In connection with that procedure, no matters have come to our attention which caused us to believe that the asterisked amounts should be adjusted.

Because the above procedures do not constitute an examination made in accordance with generally accepted auditing standards, we do not express an opinion on any amounts or items referred to above.

Touche Ross & Co.

Certified Public Accountants

Triton Industries, Inc.



Annual Report
for the Fiscal Year 1983

Board of Directors

W[illegible]t W. Booth	Chairman, Presid[illegible]nd Chief Executive Officer, Ducommun In[illegible]rated (Electronics Distribution)
Joseph T. Casey	Executive Vice President, Litton Industries, Inc.
Ransom M. Cook	Corporate Management Adviser
Thomas B. Hayward	President, Thomas B. Hayward Associates, Inc. (Executive Consultants)
Orion L. Hoch	President and Chief Operating Officer, Litton Industries, Inc.
Glen McDaniel	Consultant, Litton Industries, Inc.
Don G. Mitchell	Corporate Management Adviser
Fred W. O'Green	Chairman and Chief Executive Officer, Litton Industries, Inc.
Jayne B. Spain	Distinguished Visiting Professor and Executive-in-Residence, School of Government and Business Administration, George Washington University
C.B. Thornton, Jr.	President, Thornton Corporation (Mining and Other Investments)
Norman H. Topping	Chancellor Emeritus, University of Southern California
James O. Wright	Investments
James H. Zumberge	President, University of Southern California

Advisory Directors

J. Edward Lundy	Corporate Management Adviser
Arjay Miller	Dean Emeritus, Graduate School of Business, Stanford University

Officers

Chairman of the Board	Fred W. O'Green		
President	Orion L. Hoch		
Executive Vice Presidents	Joseph F. Caligiuri	Arnold R. Kaufman	
	Joseph T. Casey		
Senior Vice Presidents	Leonard Erb	Robert H. Lentz	Booth B. Strange
	Nathaniel S. Howe	Roland O. Peterson	Grady W. Warwick
Senior Vice President and Controller	Wayne L. Grosvenor		
Senior Vice President and Secretary	George W. Fenimore		
Vice Presidents	Charles S. Bridge	Richard T. Hopman	Justin S. Oppenheim
	Mathias J. Diederich	L.E. Jenneke	Alex B. Owen
	M. Howard Dingman, Jr.	Robert F. Kane	Gordon G. Palmer
	Charles Fink	Ronald R. Keating	Ronald E. Quigley
	R. Patrick Forster	Walter P. Lukens	Wolfgang Schaer
	Charles A. Gallagher	James C. Nance	Julius W. Vetter
	Charles E. Holmquist	Thomas M. O'Donnell	Stanley E. Webber
Vice President and Treasurer	George E. Boullianne		
Staff Vice Presidents	Theodore F. Craver	Rudolf Ernst	Norman L. Roberts
	Francis L. Crowley, Jr.	Deane E. McCormick, Jr.	Walter R. Thiel

The Company was impacted by the recession during fiscal 1983, causing net earnings to be off from record prior year levels. Lower interest income on invested cash and marketable securities resulting from a decline in interest rates, contributed to lower net earnings. Sales also declined in 1983 when compared to the two prior years. The economic downturn had an adverse impact on the Business Systems segment, which experienced a loss in 1983. Falling demand for oil and the recession have affected customer demand in the Industrial Systems and Services segment, particularly the resource exploration product line. This downturn also impacted the Company's finance subsidiaries in their financing of petroleum related equipment. Refer to pages 46-47 for a discussion of the impact of changing prices on the Company.

The Company's primary source of liquidity in the past three years has been funds provided from operations, including funds provided by advance payments under certain contracts. The July 31, 1983 balances of unrestricted cash and marketable securities of $1.159 billion and unused credit commitments of $585 million, are indicative of the Company's financial strength and flexibility.

The continued financial strength of the Company enabled the acquisition of businesses in strategic market areas and the payment of record cash dividends to common shareholders in the current year. Other primary applications of internally generated funds have been in the areas of capital expenditures and research and development. The outlays for these were in excess of $760 million and $750 million, respectively, over the past three years.

Report of Independent Public Accountants

Board of Directors
and Shareholders
Litton Industries, Inc.
Beverly Hills, California

We have examined the consolidated balance sheets of Litton Industries, Inc. and subsidiary companies as of July 31, 1983 and 1982, and the related statements of operations, shareholders' investment and changes in financial position for each of the three years in the period ended July 31, 1983. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the consolidated financial position of Litton Industries, Inc. and subsidiary companies at July 31, 1983 and 1982, and the results of their operations and the changes in their financial position for each of the three years in the period ended July 31, 1983, in conformity with generally accepted accounting principles applied on a consistent basis.

TOUCHE ROSS & CO.
Certified Public Accountants

3700 Wilshire Boulevard
Los Angeles, California
September 26, 1983

Litton's financial performance in fiscal year 1983 reflected the imbalance of the current economic recovery. A number of factors combined to affect earnings comparisons with the records achieved in fiscal year 1982. Among these were the coincidence of our fiscal year with the worldwide downturn in the machine tool and heavy industrial equipment businesses, the global oil oversupply which affected our highly profitable Resource Exploration business, and declining interest rates which lowered net interest income by almost $30 million.

The Company remained healthy and profitable, however, achieving a pre-tax profit margin of almost nine percent and a year-end cash position of $1.24 billion. Credit for this performance is due to the skills of Litton employees at all levels. Working under tight management they were able to reduce expenses and net working assets which helped maintain our strong cash position.

Assessing our near term outlook, we expect sales and profit performance will be improved in fiscal year 1984. Although we anticipate the possibility of tighter congressional constraints on defense spending, we are confident the diversity of our high technology defense business as well as the importance of the requirements fulfilled by our defense electronics products will support continued growth in our defense operations. The Business Systems segment performance will improve with an expanding economy and new product introductions. Our machine tool and material handling businesses are encountering the traditional lag in capital spending as the economy improves. Machine Tool group performance will improve as the year progresses. Automated material handling businesses are recovering faster as order input and backlogs were higher at year-end. The current worldwide oversupply of petroleum continues to affect Litton's Resource Exploration group. We do not expect significant growth in the overall market for geophysical services until fiscal year 1985. Litton maintains a strong leadership position—in terms of technology and market share—in our Resource Exploration business and we are ready to respond to that market whenever the business upturn begins.

We continue to focus our strategic planning on three core business areas—defense electronics, industrial automation and resource exploration.

A number of specific actions taken during this past year support this strategy. The acquisition of Itek and its capabilities in radar threat warning systems and optical surveillance products, as well as International Laser Systems, a leader in laser targeting devices, established Litton as a leading electronic warfare systems supplier. We are currently expanding our geophysical services into the area of reservoir engineering, a key component of resource exploration technology. Other small acquisitions selectively broadened the Company's capabilities in automated material handling systems.

In our resolve to dispose of businesses not fitting our long-term strategy, the Company sold its Paper, Printing and Forms operation to a group of investors headed by senior management of the business. After the close of the fiscal year, we signed a letter of intent to sell the Monroe Systems for Business division to Compucorp, a wordprocessor and computer systems manufacturer.

We plan further acquisitions and dispositions as we continue to sharpen the focus of the Company on our core businesses. We are on the way toward our goal of optimizing the Company's considerable technical strengths and assets to concentrate on forging Litton into an advanced applied electronics company, preeminent in defense, industrial automation and geophysical markets.

Fred W. O'Green
Chairman

Orion L. Hoch
President

October 10, 1983

	Year Ended July 31,		
	1983	1982	1981
Sales and Service Revenues	$4,719,206,000	$4,941,820,000	$4,942,835,000
Net Earnings:			
Operations	$ 232,511,000	$ 319,636,000	$ 306,502,000
Currency Adjustments	(951,000)	(4,676,000)	(891,000)
Gain on Sale of Subsidiary	—	—	5,955,000
Total	$ 231,560,000	$ 314,960,000	$ 311,566,000
Earnings per Share:			
Operations	$5.54	$7.65	$7.33
Currency Adjustments	(.02)	(.11)	(.02)
Gain on Sale of Subsidiary	—	—	.15
Total	$5.52	$7.54	$7.46

Attachment VI

Plans and Specifications for Hazardous

Waste Drum Storage Building

Beling Consultants

March 2, 1983

Clifton Precision Instruments and
Life Support Division
Hickory Grove Road
P.O. Box 4508
Davenport, Iowa 52808

Subject: Storage Facilities
Clifton Precision
Our File: 20257-B-4966-2

Attn: Mr. Bill Moats

Gentlemen:

On March 1, 1983, I met with your Mr. Bill Moats and Paul Bohnsack and presented the technical performance specifications and explanatory sketches. A brief review of these documents resulted in questions which I agreed to answer. After meeting with our project team, I telephoned Mr. Moats on March 2, 1983, and presented the following comments relative to the above-mentioned questions:

1. Our technical specifications are correct in that there is a 3-phase transformer proposed because 3-phase is the only source readily available at the proposed site location. One phase of this will be used for the primary.

2. We feel that the thermostically-controlled ventilation system is not necessary. If you desire the thermostatic control, we would be happy to revise the technical specifications accordingly.

3. The ventilation system as presently designed will remove fumes and odors that may develop inside the building; as such, the intake air will be provided through natural openings in the doors, particularly the garage door. Again, if the system that you have in mind is different than the above, we would be happy to change the technical specifications accordingly.

Relative to the above three items, it is my understanding that you are satisfied with the technical specifications as they currently exist and you would not require changing them.

Once you have completed your review, please contact us if you have any questions or require any modifications.

Very truly yours,

BELING CONSULTANTS, INC.

Robert G. Meyer, P.E.

pd

cc: Paul Bohnsack, Mgr. Safety, Security & University Relations - Clifton Precision
John Jurca - Warren Lloyd - John Riley - BEC

Beling Consultants

February 28, 1983

Clifton Precision Instruments and
Life Support Division
Hickory Grove Road
P.O. Box 4503
Davenport, Iowa 52808

Atn: Mr. Bill Moats, Plant Engineer

Subject: Hazardous Waste Storage
Facility
Clifton Precision PO: SD-39599
Our File: 20257-B-4966-2

Gentlemen:

Enclosed are two (2) copies of the technical performance specifications and explanatory sketches in accordance with our letter-agreement dated January 14, 1983, and subsequent conversations with you.

We request that you now review this information and contact us for any necessary coordination with USEPA and IDEQ.

A copy of the enclosure along with the approval letters from IDEQ and USEPA should be submitted to Mr. Clyde Short at the Davenport Building Department for the necessary building permit.

If you have any questions or require further information, please contact us.

Very truly yours,
BELING CONSULTANTS, INC.

Robert G. Meyer

Robert G. Meyer, P.E.

enc
pd
cc: Mr. Paul Bohnsack, Manager - Safety, Security, and University Relations - Clifton Precision

STORAGE FACILITY

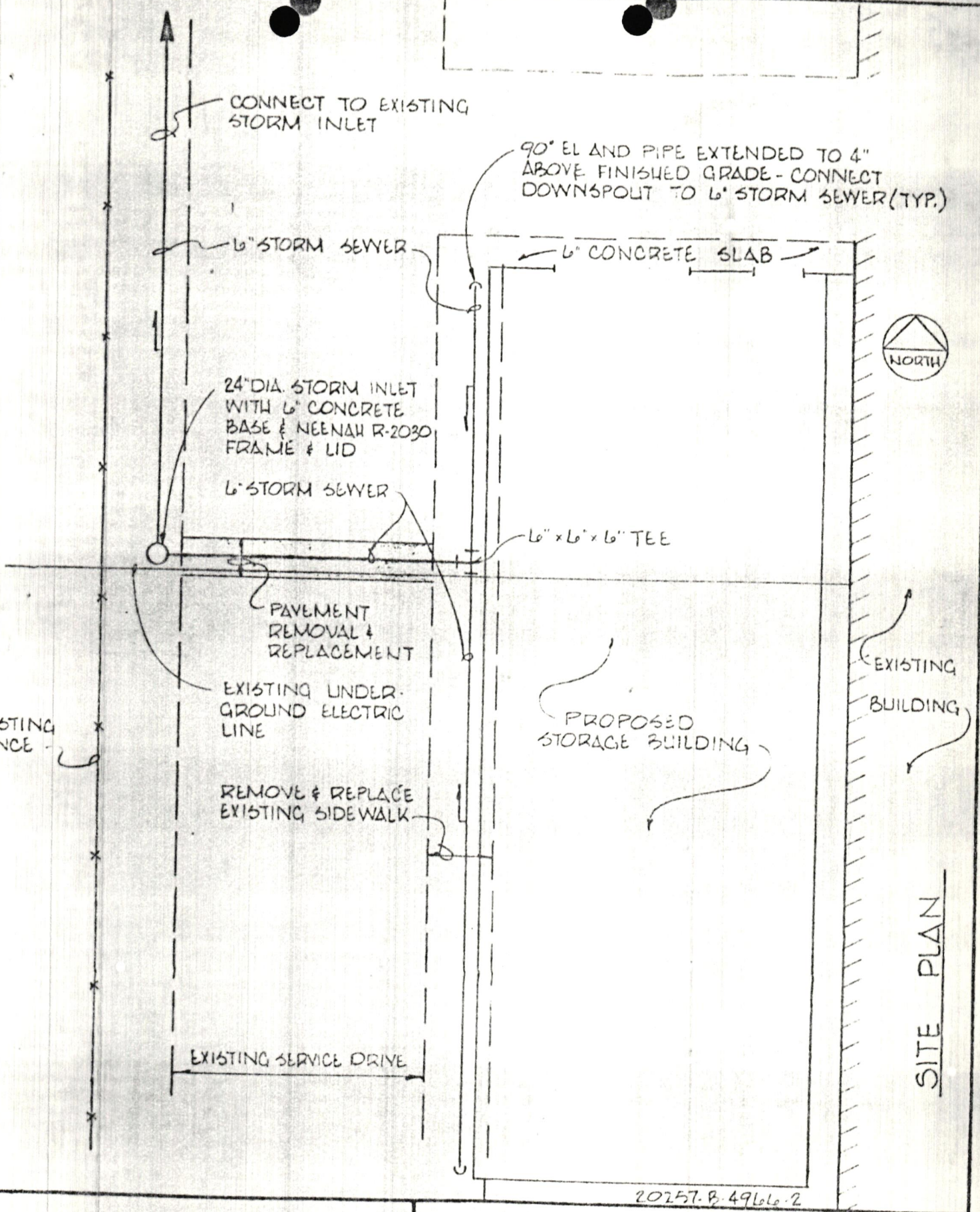
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

JOB NO. 20257-B-4966-2

I hereby certify that this plan, specification or report was prepared by me or under my direct personal supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa

Signed _____ Date 2/28/83
Henry Mayer, P.E. - Iowa Reg. #6003

Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757-9600

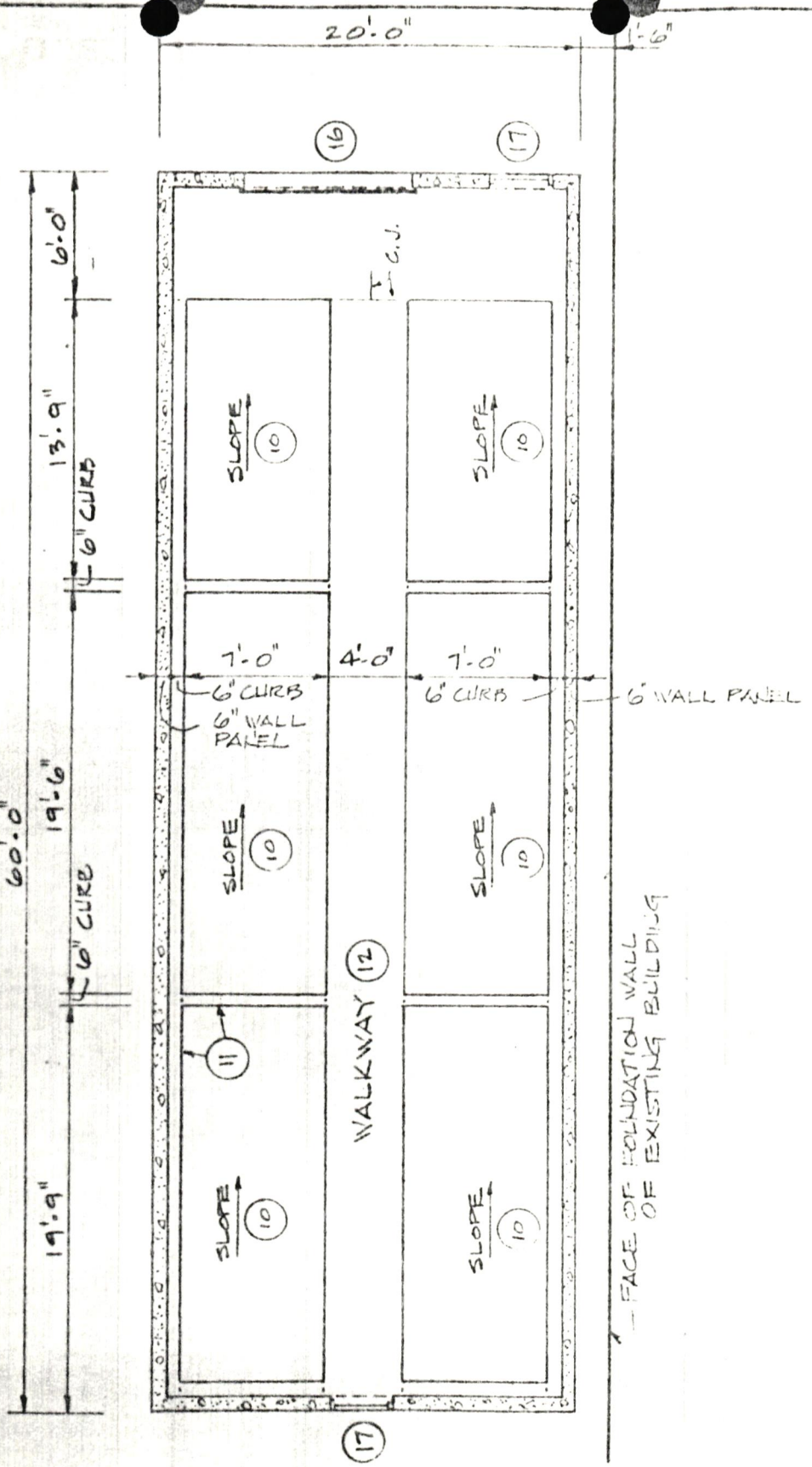


20257-B-49666-2

Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757 9800

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: NONE	DRAWN BY: MLH	SHEET
	DATE: FEB '83	CHECKED BY: RCM	134



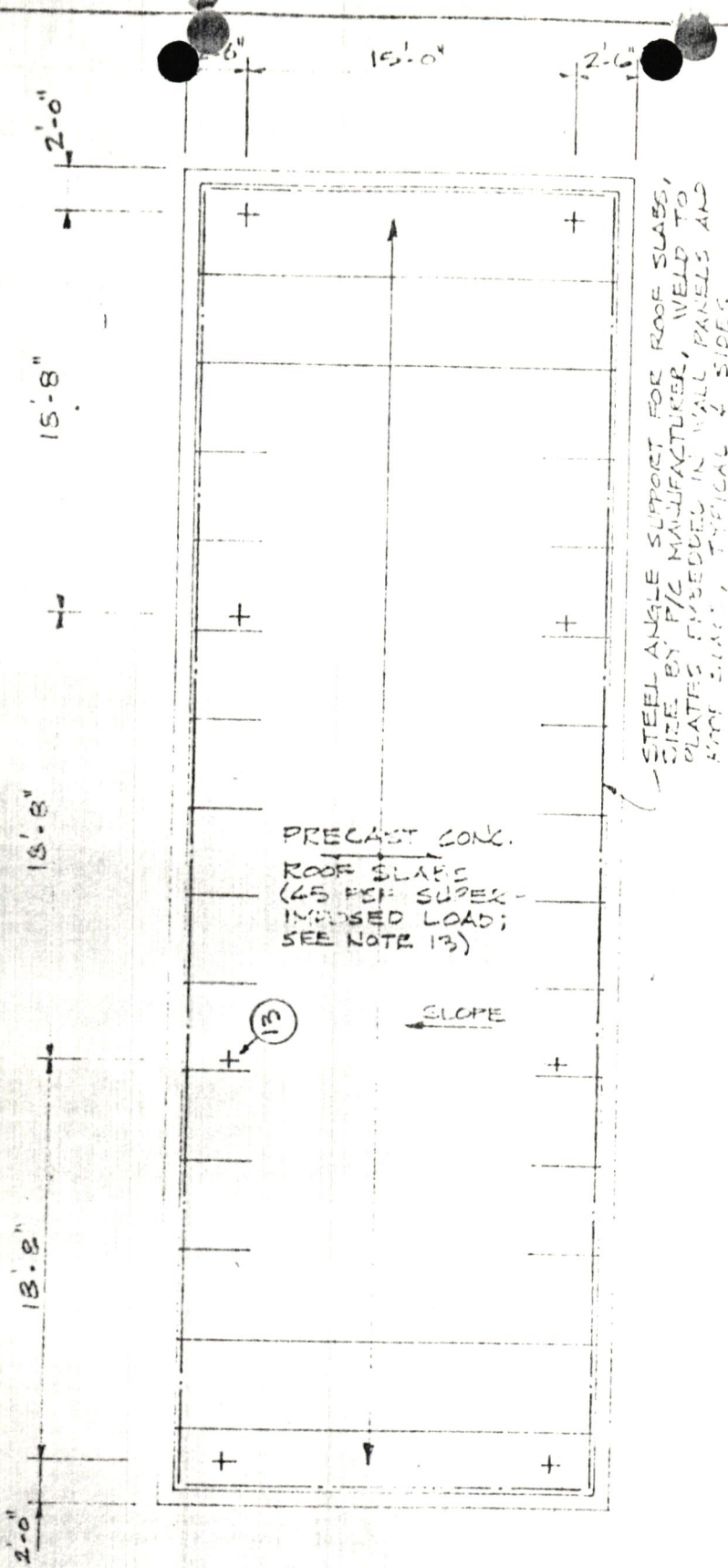
FLOOR PLAN

20257-B-4966-2

Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309/757-9900

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: 1/8" = 1'-0"	DRAWN BY: RILES	SHEET 1135
		CHECKED BY:	



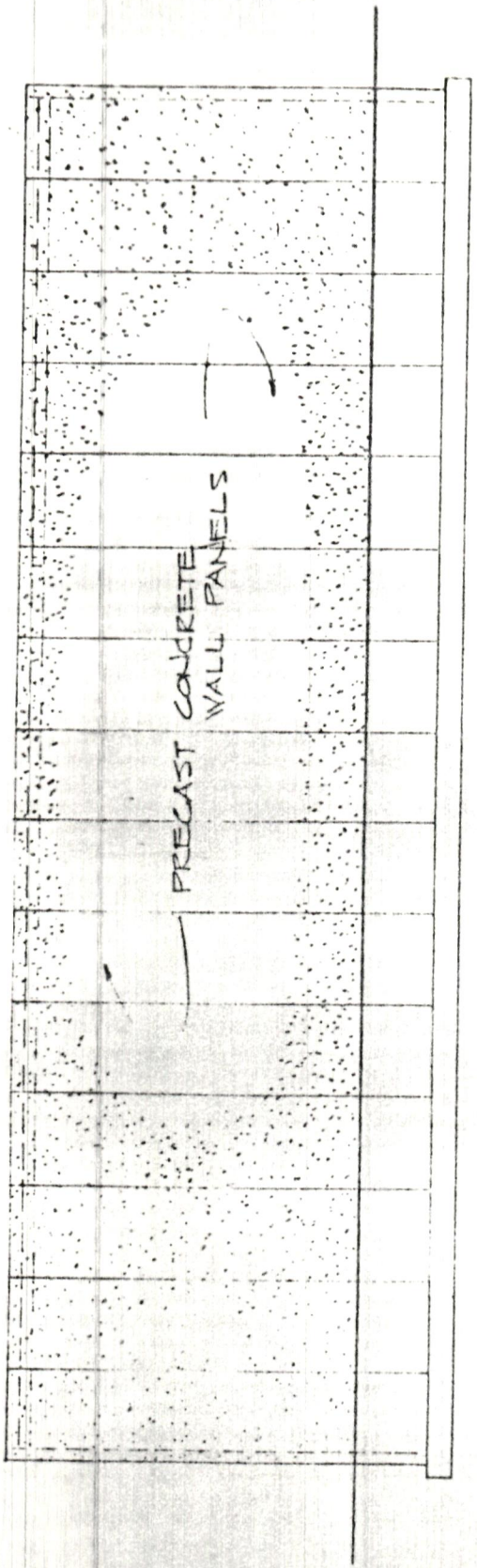
ROOF PLAN

20257-B-4966-2

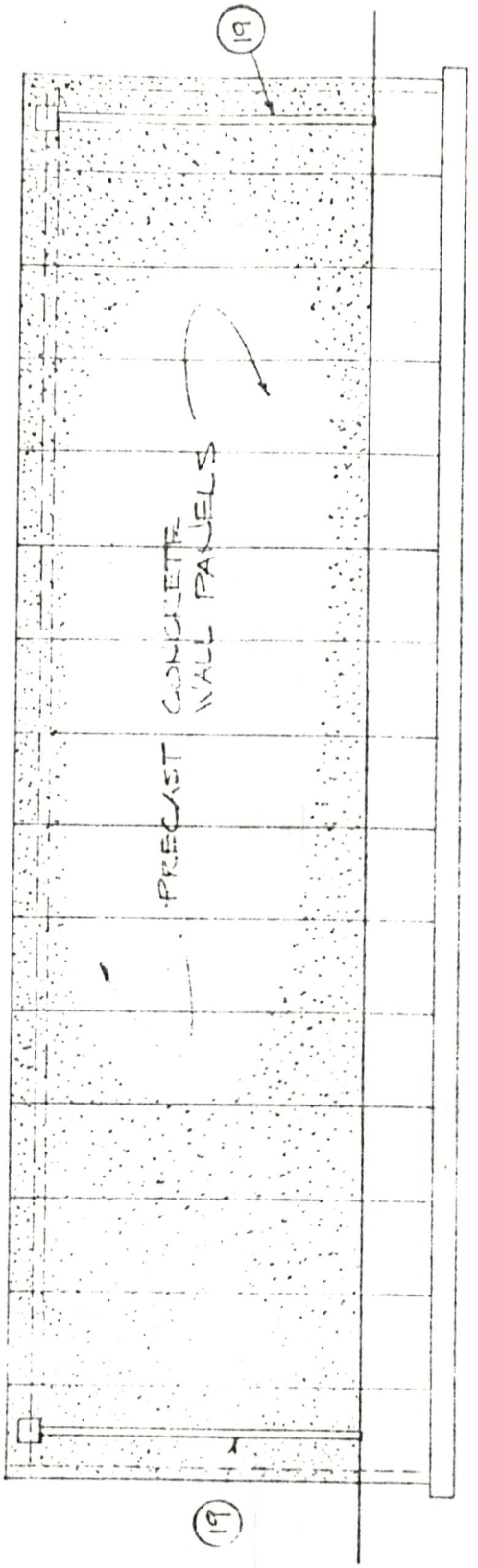
Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757-9800

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: 3/8" = 1'-0"	DRAWN BY: RILEY	SHEET 2
	DATE: FEB. '83	CHECKED BY: RILEY	



EAST ELEVATION



WEST ELEVATION

20257-B-4966-2

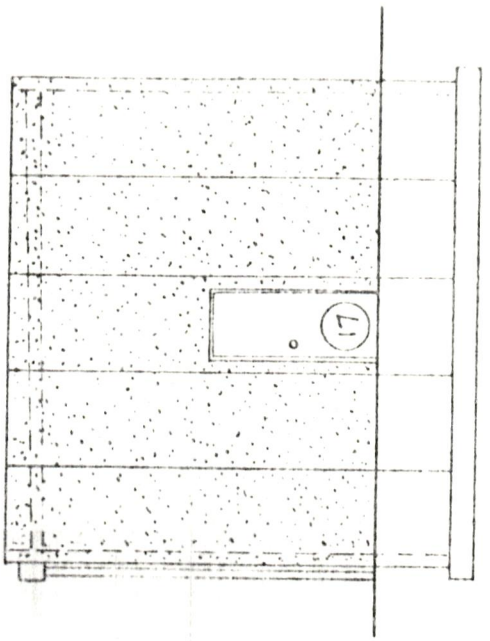
Beling Consultants

Professional Engineers

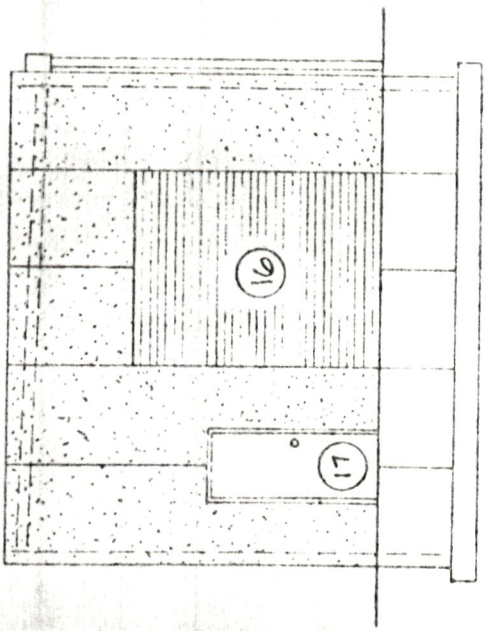
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757-9800

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: 3/32" = 1'-0"	DRAWN BY: RILEY	SHEET 3 137
		CHECKED BY:	



SOUTH ELEVATION



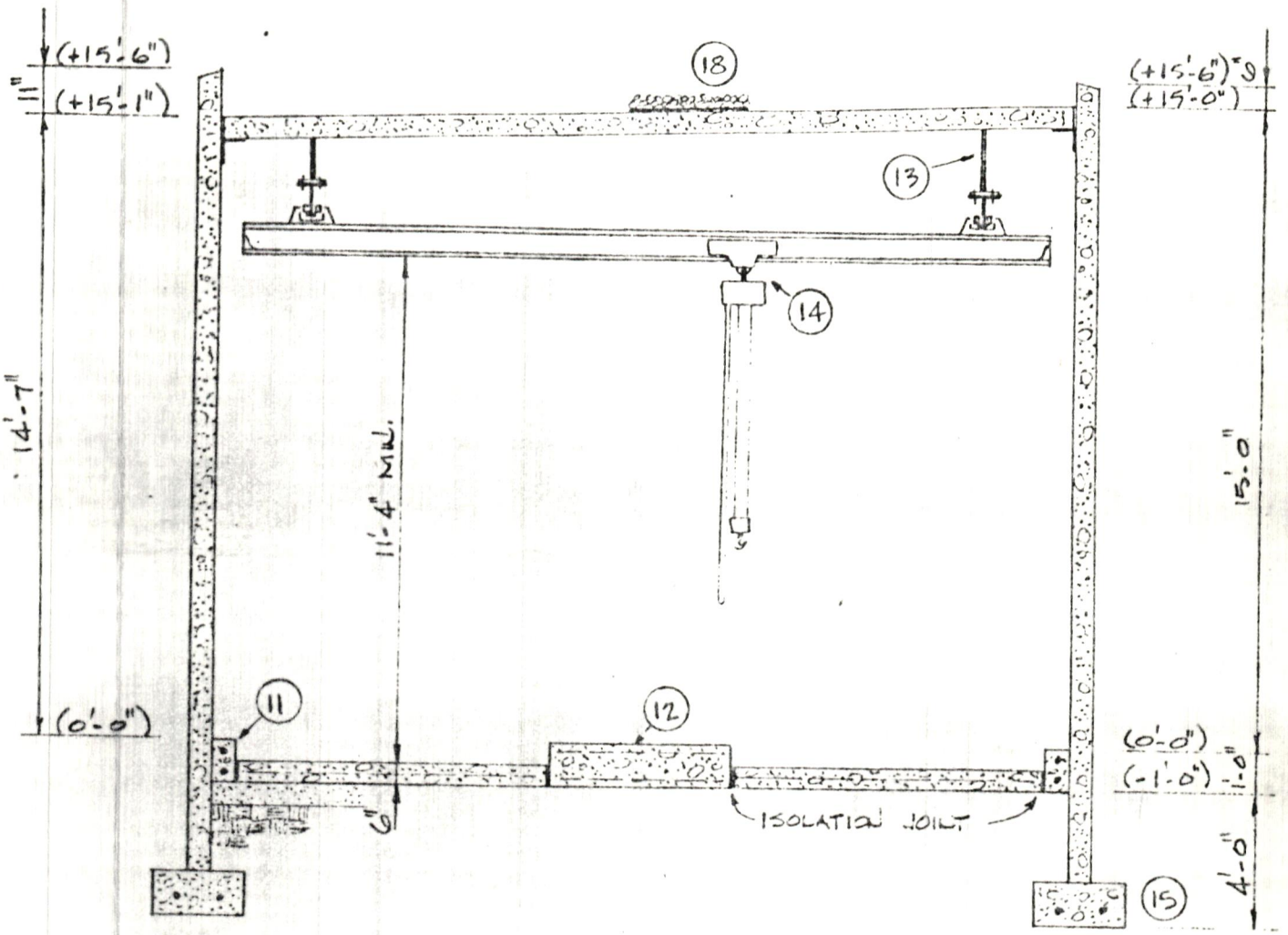
NORTH ELEVATION

20257·B·4960·2

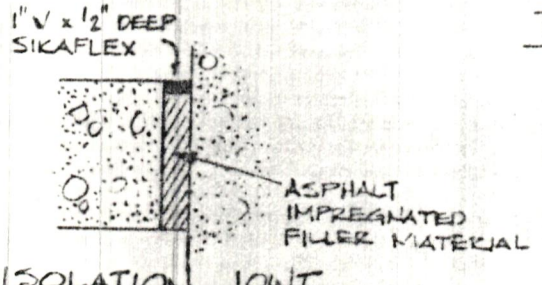
Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757-0936

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: 1/8" = 1'-0"	DRAWN BY: RILEY	SHEET 4
	DATE: FEB. '83	CHECKED BY: RILEY	



TYPICAL SECTION



ISOLATION JOINT

20257-B-4966-2

Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757-9800

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: 1/2" = 1'-0"	DRAWN BY: RILEY	SHEET 5
	DATE: FEB. '93	CHECKED BY: RILEY	

NOTES TO DRAWINGS

1. DESIGN SOIL PRESSURE = 2500 PSF
2. CONCRETE, CAST-IN-PLACE (28 DAY), f'_c = 4000 PSI
3. REINFORCING STEEL: ASTM A615-60
4. STRUCTURAL STEEL: ASTM A36
5. ROOF LIVE LOAD = 30 PSF SNOW
6. LATERAL LOAD: 25 PSF WIND
   SEISMIC RISK ZONE 1
   OCCUPANCY IMPORTANCE FACTOR 1.0
7. ELEVATIONS GIVEN THUS (+10'-0") ARE WITH REFERENCE TO THE FLOOR SLAB OF THE EXISTING BUILDING ARBITRARILY ASSUMED TO BE (0'-0").
8. CONCRETE REINFORCING SHALL BE IN ACCORDANCE WITH "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315-65."
9. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF "ACI 301-72 (REVISED 1976), SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS BELOW.
   A) ALL EXPOSED SURFACES OF CURBS AND SLABS-ON-GRADE ARE TO RECENE ONE COAT OF CHEM-RESIST, SANDSTROM PRODUCTS, PORT BYRON, IL.; COLOR SELECTED BY OWNER; BROADCAST SAND FOR SKIDPROOFING.
   B) CURING SHALL BE BY ONE OF THE METHODS WHICH KEEP THE SURFACE CONTINUOUSLY WET; LIQUID MEMBRANE-FORMING COMPOUNDS ARE NOT PERMITTED.
10. FLOOR SLAB PANELS: 6" THICK CONCRETE REINFORCED WITH 6x6-6/6 W.W.F.; SLOPE FROM (-0'-4") AT SOUTH END TO (-0'-6") AT NORTH END; ISOLATE ALL AROUND AS SHOWN IN DETAIL ON SHEET 5.
11. CONCRETE CURBS: 6" WIDE x 1'-0" HIGH CONCRETE REINFORCED WITH 1#5 BAR TOP AND BOTTOM.
12. WALKWAY: 4'-0" WIDE x 1'-0" THICK CONCRETE REINFORCED WITH 6x6-10/10 W.W.F. TOP AND BOTTOM.

Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757-9800

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: NONE	DRAWN BY: KILEY	SHEET
	DATE: FEB. '83	CHECKED BY: KILEY	6

(13) OVERHEAD CRANE SUPPORT: VERIFY LOCATION, LOAD AND SWAY BRACING REQUIREMENTS WITH CRANE MANUFACTURER; P/C MANUFACTURER TO COORDINATE SUPPORT CONNECTIONS WITH CRANE MANUFACTURER.

(14) OVERHEAD CRANE SPECIFICATION: 1½ TON MANUAL, PATENTED TRACK, HANGER ROD SUPPORTED, SWAY BRACED.

(15) FOOTINGS: 2'-0" WIDE x 1'-0" THICK CONCRETE FOOTINGS REINFORCED WITH 2#5 BARS LONGITUDINAL; FOUNDED ON FIRM UNDISTURBED GLACIAL CLAY TILL; BOTTOM OF FOOTINGS SHOWN AT ELEVATION (-5'-0"), BUT MAY NECESSARILY BE DEEPER; SEE SOILS REPORT.

(16) ROLLING DOOR: 8' WIDE x 10' HIGH FACE-MOUNTED ROLLING SERVICE DOOR; GRAY PRIMER FINISH ON GALVANIZED STEEL INTERLOCKING SECTIONS; EXPLOSION PROOF MOTOR OPERATOR WITH 10 SECOND MAXIMUM CLOSE TIME; FINISH COAT TO BE SELECTED BY OWNER.

(17) MAN DOORS: 3' x 7' CLASS A 1¾" FLUSH HOLLOW METAL DOOR AND FRAME (16 GAUGE WITH HARDWARE REINFORCEMENT); ONE COAT RUST INHIBITNE PRIMER, FINISH COAT TO BE SELECTED BY OWNER; PANIC EXIT MECHANISM (MORTISE) WITH EXTERIOR KNOD (KEY SET LINKED TO OWNER'S MASTER); THREE BALL BEARING HINGES WITH NONREMOVABLE PINS; INTERIOR MOUNTED CLOSER; VINYL GASKET WEATHERSTRIPPING; LATCH TRACK THREASHOLD.

(18) ROOFING: LOOSE-LAID BALLASTED ELASTOMERIC SHEET ROOFING; SLIP SHEET, FLASHING, AND ACCESSORIES AS REQUIRED FOR DURABILITY AND WATERTIGHTNESS; 10 YEAR WARRANTEE.

(19) SCUPPER AND DOWNSPOUT: MINIMUM 24 GAUGE GALVANIZED STEEL; FINISH COAT TO BE SELECTED BY OWNER.

Beling Consultants
Professional Engineers
Beling Building, 1001 - 16th Street
Moline, Ill. 61265, 309 / 757-9800

STORAGE FACILITY
LITTON - CLIFTON PRECISION
DAVENPORT, IOWA

REVISIONS:	SCALE: NONE	DRAWN BY: RILEY	SHEET
	DATE: '83	CHECKED BY: RILEY	7.141

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Storm sewer conduits.

B. Fittings, joints and connections.

C. Trenching, backfilling and compacting.

D. Storm drainage structures.

E. Restoration of surfaces.

1.02 REFERENCES

A. American Water Works Association, AWWA:
1. C104: Standard for Cement-Mortar Lining for Cast-Iron and Ductile-Iron Pipe and Fittings for Water and Other Liquids.
2. C111: Standard for Rubber Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
3. C150: Standard for Thickness Design of Ductile-Iron Pipe.
4. C151: Standard for Ductile-Iron Pipe Centrifugally Cast in Metal Molds or Sand-Lined Molds for Water and Other Liquids.
5. C301: Standard for Prestressed Concrete Pressure Pipe, Steel Cylinder Type, For Water and Other Liquids.

PART 2 - PRODUCTS

2.01 STORM SEWER PIPING SPECIFICATIONS

A. Ductile-Iron Pipe, 6 Inch Diameter at 1.10% Minimum Slope.
1. Pipe: AWWA C151; thickness AWWA C150; cement lining, AWWA C104, Class 52.
2. Joints: AWWA C111, mechanical or push-on joints.

2.02 FITTINGS

A. Same material as pipe.

PART 3 - EXECUTION

3.01 SURVEY LINE AND GRADE

A. Contractor provides survey line and grade control hubs at maximum 50 foot spacing, and at change in line and grade; except where laser is used, greater intervals can be maintained.

B. Check line and grade of batter boards, laser beam, and pipe to ensure compliance with specified intervals; remedy any causes for non-compliance.

3.02 PIPE LAYING

A. Preparation:
1. Locate sewer parallel to driveway and minimum 2 feet beyond edges; when crossing driveway, sawcut concrete at and adjacent to existing utility crossing.
2. Lay sewer pipe only after trench has been dewatered and 6 inches clean granular bedding has been placed.
3. Keep mud, silt, gravel and other foreign material out of pipe and off jointing surface.

B. Lay pipe to conform to line and grades indicated including limits.
1. Retain all pipe in position to maintain alignment and joint closure until sufficient backfill has been completed to adequately hold pipe in place.
2. Maintain minimum 3 batter boards in position during all pipe laying, unless laser beam is used.

C. Lay sewer pipe up-grade from connection point on existing sewer or from designated starting point, unless otherwise approved by Engineer.
1. Install pipe with bell end forward or up-grade.
2. When pipe laying not in progress, keep forward end of pipe tightly closed with approved temporary plug.

D. Tolerances:
1. Variance from established lines and grades: Maximum 1/32 inch per inch pipe diameter, and maximum 1/2 inch total.
   a. Provided that above specified variation does not result in level or reverse sloping invert.
   b. Provided that variation in invert elevation between adjoining pipe ends due to non-concentricity of joining surface and interior pipe surface does not exceed 1/64 per inch pipe diameter or total 1/2 inch maximum.

E. Sewer Pipe and Water Main Separation:
1. Parallel Installation: Sewers and water mains.
   a. Maintain minimum 10 feet horizontally edge-to-edge from water mains to all sanitary sewer, storm sewer or sewer manhole.
2. Where local conditions prevent 10-foot horizontal separation, add following:
   a. Bottom of water main minimum 18 inches above top of sewer.

b. Sewer constructed of materials and with joints equivalent to water main standards for 10 feet perpendicular both sides of water main.

3. Crossings: Water mains over sewers:
   a. Lay to provide minimum 18 inches between bottom of water main and top of sewer.
4. Where local conditions prevent vertical separation in 3.a. above, add following:
   a. Sewer constructed of materials and with joints equivalent to water main standards for 10 feet perpendicular both sides of water main.
5. For water mains under sewers, add following:
   a. Minimum 18 inches between bottom of sewer and top of water main.
   b. Adequate structural support for sewers to prevent settling on water mains.
   c. Center length of water pipe at crossing point so that joints are equidistant and far as possible from sewer.
6. Sewer Manholes: No water pipe through or in contact with manhole.

3.03 BACKFILLING

A. Backfill: Clean granular material mechanically compacted in 6 inch thick layer.

3.04 RESTORATION OF SURFACES

A. Restoration of concrete sidewalk and driveway conforming to applicable requirements of concrete building foundation and floor.

B. Disturbed grass areas: Sodded.

END SECTION

1. HEATING

Install two steam horizontal propeller-type unit heaters, each having a capacity of 80,000 BTU/hr. Unit heaters shall have unit-mounted thermostats. All motors and controls shall be explosionproof. Unit heaters shall be hung from wall brackets. Unit heater location shall be coordinated to provide minimum interference with lights and overhead crane.

Tap existing 4-inch, 10 psi steam main in existing building. Install a new 2-inch A120, Schedule 40 steam line into new building. Run 1-1/4-inch supply lines to each unit heater. All drops in steam lines shall have float and thermostatic drip.

Unit heaters shall be isolated with pipe size gate valves. Install 1-inch F & T trap and strainer on each unit heater. Route 1-inch condensate return lines to a new floor-mounted duplex condensate return pump. All pump motors and controls shall be explosionproof. Install new 1-inch pumped condensate line and connect to existing 1-1/2-inch low pressure condensate line. Pump shall be isolated with pipe size gate valves.

2. VENTILATION

Install new centrifugal roof exhauster on curb. Fan to be sized for 2000 cfm at 1/4-inch static pressure. Fan to be controlled by start-stop pushbutton station near electric panel. Fan motor and controls shall be explosionproof.

Install two new 16-inch x 12-inch duct runs approximately 15 feet long close to ceiling and terminate in a plenum below exhaust fan. Install 16-inch x 16-inch steel exhaust grille in the bottom of each duct run. Duct to be fabricated and installed to SMACNA Standards.

Install fire damper in exhaust duct where it penetrates the roof. Damper shall have a linkage held open by a electro-thermal link.

3. FIRE PROTECTION

Install Halon 1301 fire protection system including 400 lb. Halon cylinder with 375 lbs. of Halon 1301, two 360° discharge nozzles piped from cylinder with ASTM A53 Schedule 40 seamless pipe, 3 heat detectors and 2 infrared detectors that are cross-zoned to automatically discharge system, and explosionproof control panel with battery back-up.

Install two combination manual pull-abort stations, one at each exit. Install one warning horn and light outside the building that will sound when any detector senses a fire.

When any detector senses a fire, the Halon system shall:

a. Stop ventilating fan.
b. Close fire damper

c. Close overhead door.
d. Sound alarm.
e. Alert a new annunciator installed in present guardhouse.

When any two detectors sense a fire, the Halon system shall discharge Halon gas after a preset (adjustable) time delay. There shall be no time delay on manual discharge.

ELECTRICAL

1. ELECTRICAL SERVICE

A. Use existing 460 volt, 3 phase bus duct in existing building.

(1) Install 30 amp/2 pole bus tap switch. Fuse switch at 20 amps.

(2) Install feeder from bus duct to exterior wall of existing building. Feeder to be run overhead, supported from existing roof joists.

(3) At exterior wall, feeder to be run underground to new building. Cut and patch existing building wall as required. Provide trenching and backfilling for installation of underground feeder.

B. At storage facility building, install package transformer/load center on exterior side of north wall, east of the man door.

(1) Package transformer/load center to be equal to Square D Type MPZ "Mini Power-Zone" with:

5 KVA Transformer:
Primary: 460 volt - 1 phase
Secondary: 120/240 volt - 1 phase

20 amp/2 pole primary main circuit breaker

25 amp/2 pole secondary main circuit breaker

Four 20 amp/1 pole branch circuit breakers

Weatherproof enclosure.

(2) Terminate 460 volt feeder from existing bus duct at transformer primary circuit breaker.

(3) Install ground rod and ground wire for transformer.

2. LIGHTING FIXTURES

A. Suitable for use in hazardous area. U.L. listed for Class I, Division 1, location.

B. Equal to G.E. "Powr-Gard" #H9-1-15S-3C-HH-H9000-001, with:

150 watt high-pressure sodium lamp
120 volt ballast
Ceiling mounted
Glass globe and guard
Reflector

C. Install fixtures tight to ceiling above center aisle. Install fixtures 10'-0" O.C. A total of six (6) fixtures are required.

D. Wire fixtures to a 20 amp/1 pole circuit breaker in the load center through an explosionproof switch located on the north wall between the man door and the overhead door.

3. ELECTRICAL WIRING - GENERAL

A. Raceways: All raceways within storage building and underground to be rigid galvanized steel.

B. All raceways, wiring and devices within storage building to be suitable for use in hazardous location and to be installed in compliance with NEC Article 501 - "Class I Locations".

(1) Install conduit seals on all conduits per NEC 501.

4. EQUIPMENT WIRING

A. Install branch circuits for equipment as follows:

(1) 20 amp branch circuit for lighting fixtures and fire protection system.

(2) 20 amp branch circuit for overhead door operator.

(3) 20 amp branch circuit for exhaust fan.

(4) 20 amp branch circuit for unit heater fan motors and condensate return pumps.

B. Install control wiring from pushbutton station to overhead door operator.

5. EXISTING UNDERGROUND CONDUIT

Relocate existing underground conduit and wiring for parking lot lighting as required by construction of storage building.

Litton CLIFTON PRECISION
Instruments & Life Support Division

2734 Hickory Grove Road, P.O. Box 4508, Davenport, Iowa 52808 319-383-6000

29 March 1983

Mr. Lyndell L. Harrington, P.E.
Chief, Permits Section
Waste Management Branch
Air and Waste Management Division
United States Environmental Protection Agency
Region VII
324 East Eleventh Street
Kansas City, Missouri 64106

RE: Litton-Clifton Precision
Instruments & Life Support
Davenport, Iowa
EPA I.D. No.: IAD005268420

Dear Mr. Harrington:

In accordance with our letter of 28 February, the finalized Technical Performance Specifications for our proposed hazardous waste storage facility are enclosed. A second copy is included should you want to send one to the Iowa DEQ.

Very truly yours,

Paul E. Bohnsack
Manager - Safety & Security

PEB:si
Encs.

City of Davenport

Davenport Fire Department
331 Scott Street
Davenport, Iowa 52801

May 1, 1984

Mr. Paul Bohnsack
Clifton Precision Instruments and
Life Support Division
Hickory Grove Road
P.O. Box 4508
Davenport, Iowa 52808

Re: Hazardous Waste Storage Facility

Dear Sir:

In response to your request that we meet and discuss the prepared plans for your hazardous waste storage building, the following is submitted.

A meeting was held at the plant site at 2734 Hickory Grove Road. The areas pertaining to Fire Department involvement and Fire Codes were discussed.

In reference to Item 3A of the letter from W.A.W.M., the company's plan for the separation of the various wastes is in compliance with the existing codes.

In reference to Item 3B, the barrels in storage do not require grounding.

In reference to Item 5, the attached building plan has been reviewed and approved by the Fire Marshal.

In reference to Item 5A, the 48" aisle width meets existing requirements. As we view the plans, there are no "secondary" aisle, only some space left between rows of barrels to visually inspect them.

In reference to Item 5B, the handling procedure when operating the crane as you described in our meeting meets existing standards.

As we discussed, the two areas suggested for change were the addition of closing devices on the storm sewer systems, and the requirement not to have the barrels containing flammable or combustible liquids stacked.

Respectfully,

Lawrence A. Hartman
District Chief
Hazardous Materials Officer

Wayne L. Vandemark
Division Chief
Fire Marshal

LAH/WLV/gm

Attachment VII

Regulations